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A Course of Lectures

ON

URINE, URINARY DEPOSITS, AND CALCULI.

DELIVERED AT THE PATHOLOGICAL LABORATORY, DURING THE SESSION 1857-58.

BY

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LECTURE VIII.

Of the Treatment of Cases of Chylous Urine. FATTY MATTER IN URINE. *Different States in which Fatty Matter occurs in Urine. Cholesterine in Urine. Composition of Fatty Matter passed in Cases of Fatty Degeneration of the Kidney. Kiestein.* OTHER FORMS IN WHICH FATTY MATTER OCCURS IN URINE. *Urostealith. Fluid Yellow Fat. Fatty Matter in Rabbits' Urine. Erroneous Observations connected with the Presence of Fatty Matter in Urine.*

[*Concluded from page* 774.]

Of the Treatment of cases of Chylous Urine. Various plans of treatment have been tried in cases of chylous urine, but without very satisfactory results. Astringents have proved useful in many instances; and in one of Dr. Bence Jones's cases, the pressure of a tight belt "relieved the pain, and rendered the urine slightly less chylous."

Dr. Prout found that in some of his cases temporary relief resulted from the use of the mineral acids and astringents, as alum and acetate of lead. Opium also arrested some of the symptoms for a while. Dr. Bence Jones has tried a variety of remedies, but the greatest advantage seems to have been derived from the use of astringents. Tannic acid, acetate of lead, and nitrate of silver, were employed. Matico afforded some relief, but the most valuable remedy in Dr. Bence Jones's hands was gallic acid. Its good effects were probably due to its astringent properties, and not to any specific action. The chylous character of the urine and the albumen disappeared two days after the commencement of the use of this drug; and one case seems to have been cured by its long continued use. (For the results of a daily examination of the urine for some weeks while the patient was on gallic acid, see *Phil. Trans.*, 1850.)

In Dr. Priestley's case, the gallic acid caused such nausea that it was considered expedient to abandon its use.

Gallic acid was also tried by Dr. Goodwin of Norwich, in a case which came under his care. He says: "Gallic acid appeared to exert great influence in restraining the milky appearance of the urine. The patient took it for about nine months in 1855 and 1856; and I found his water perfectly normal in colour after six months steady use of it in doses of half a drachm three times a day. He then discontinued its use, and went to work. In four or five days, the same milky appearance presented itself, and was again removed by taking the gallic acid. He could at any time render the urine nearly normal in appearance by taking this drug; but it was necessary to avoid hard work. He only complained of occasional dimness of sight and deafness; but it was not easy to make out to what cause these symptoms were due. He left off attending the hospital in September last, when my note is as follows:—Has not had any gallic acid for three weeks, and the urine is now slightly opaline in appearance. Specific gravity, 1010; the temperature of air was about 50°. He passes seven pints and a half daily on the average. It does not coagulate with heat or nitric acid, or both combined."

Dr. Goodwin has not been able to ascertain anything of the further history of the case since September.

The very large quantity of fatty matter present in the first specimen of urine, and its total absence in the urine passed only a few hours afterwards, is remarkable in Mr. Cubitt's case, and confirms the conclusions which previous observers have arrived at with reference to this condition; viz., that the fatty matter appears in largest quantity after the absorption of chyle; although in Dr. Bence Jones's case it did not appear to be associated with any fatty condition of the blood. In Mr. Cubitt's case, we may, I think, conclude that there is no organic disease of the kidneys. First, from the absence of any symptoms; secondly, from the microscopical characters of the deposit; and, thirdly, from the fact that albumen was only present when the urine contained the fatty matter.

Upon reviewing the chief points in this and other cases, one is led to conclude that the condition does not depend upon any permanent *morbid* change in the secreting structure of the kidney, and that the chylous character of the urine is intimately connected with the absorption of chyle. The debility and emaciation shew that the fatty matter, albumen, and other nutritive substances, are diverted from their proper course, and removed in the urine, instead of being appropriated to the nutrition of the system. Whether these materials are separated from the blood by the kidneys, or find their way to these organs by some more direct course, cannot now be decided.

I trust that practitioners who have opportunities of examining many of these cases in the West Indies, will afford us assistance in endeavouring to ascertain the nature of this curious condition. Careful reports of the most marked cases are much to be desired. In *post mortem* examinations, the serum of the blood should be collected and allowed to stand, in order to see if it were milky or not. The state of the mesenteric glands, lacteals, and receptaculum chyli, should be particularly examined, and it would be desirable to inject the thoracic duct, first with transparent fluid injection, and afterwards distend it with a little strong size, when the course of the absorbent trunks might be traced, and, if necessary, parts subjected to microscopical examination.

FATTY MATTER IN URINE.

Different States in which Fatty Matter occurs in Urine. Let us now consider in what different conditions fatty matter has been found in urine. These may be briefly stated as follows:—

1. *In a molecular state*, as in chylous urine.
2. *In the form of globules*, as when oil, fatty matter, or milk, have been added to urine.
3. *In the form of globules*, free in the deposit, enclosed in cells (fat-cell), or entangled in casts.
4. *Dissolved* in small quantity by other constituents, so that its presence can only be detected by chemical examination.
5. *In the form of concretions* (urostealith, as described in one solitary case by Heller).
6. *In a fluid state*, of which two cases are reported by Dr. C. Mettenheimer.

We have already discussed the subject of chylous urine, and have referred to the admixture of oil, butter, and milk, with this secretion. The whole question of fatty matter, as it occurs inclosed in cells, is a very interesting one, and well worthy of our attention. I have examined several specimens of fatty matter, obtained from various structures in a state of fatty degeneration; and the characters of the fat, at least in some important particulars, are the same in all.

Cholesterine in Urine: Composition of Fatty Matter passed in Cases of Fatty Degeneration of the Kidney. Some years ago (1850), when examining the fatty matter which accumulates in the epithelial cells passed in the urine in great number in cases of fatty degeneration of the kidney, I was surprised to find that it contained a considerable quantity of cholesterine. The only cases in which cholesterine seems to have been

detected in urine, are those which are referred to in Simon's *Chemistry*. Gmelin is said to have found cholesterine in the urine in a case in which the flow of bile was impeded; and Möller twice detected it in kiestein, the film which rises to the surface of the urine of pregnant women, and contains sometimes much fatty matter. (Casper's *Wochenschr.*, Jan. 11—18, 1845; quoted in Franz Simon's *Animal Chemistry*, vol. ii, pp. 313, 333.) It is not stated, however, in these cases, if the crystalline form of the crystals was made out.

Other authorities, among whom is Lehmann, state that cholesterine has not been detected in urine.

The first case which I examined was that of John Ryan, a patient in King's College Hospital in 1850, under the care of Dr. Todd. The urine was pale, of acid reaction; specific gravity 1020, and contained albumen. The pale flocculent deposit consisted principally of fat cells.

The deposit from upwards of seven gallons of urine was collected upon a filter. It was dried over a water-bath, and digested in a mixture of alcohol and ether. The solution was filtered, and after being concentrated by evaporation, was allowed to cool. Crystals of cholesterine were formed in considerable number. These were subjected to microscopical examination. The fatty matter in this case was found to be composed of at least three distinct forms of fat; but in consequence of the very small quantity obtained for observation, it was not possible to examine their characters very minutely. The deposit from this urine contained—

1. A dark brown fat in very small quantity, which was soluble in ether, but insoluble in hot and cold alcohol.

2. A light brown saponifiable fat, soluble in hot but insoluble in cold alcohol.

3. A considerable quantity of pure *cholesterine*, which originally existed in the urine dissolved in the other fats.

The next case of fatty degeneration of the kidney submitted to examination was that of a man named Tiedeman, also a patient of Dr. Todd's, in King's College Hospital. The case is published in Dr. Todd's *Clinical Lectures* (Case 107). See also *Archives of Medicine*, vol. i, page 8. The fatty matter obtained from twenty-four pints of urine weighed only ·47 grains, but from this a great number of crystals of cholesterine were obtained by extraction with alcohol.

The deposit of the urine of a third case of fatty degeneration of the kidney has been submitted to examination, and cholesterine has been discovered in this instance also.

In one case in which the deposit had been kept for some time in a preservative fluid consisting of wood-naphtha, creasote, and water, the cholesterine had separated from the other constituents of the oil-globules, in the form of rhomboidal tablets.

The fatty matter deposited in the kidney in these cases also contains a large proportion of cholesterine; and I have detected the presence of cholesterine in the fatty matter of so many organs in a state of fatty degeneration, as to justify the conclusion that the formation of this substance is intimately connected with the changes taking place in this morbid process.

When cholesterine occurs in the urine, it is always dissolved in other fatty matters, so that its presence cannot be detected except by extraction with alcohol and subsequent crystallisation. It forms a part of the constituents of the minute fat-globules contained in the epithelial cells and casts of the uriniferous tubes, which Dr. Johnson has proved to be so characteristic of this form of kidney-disease.

Surprise has often been excited by observing that oil-globules passed in the urine in these cases, sink to the bottom of the vessel, when we should expect rather to find the fatty matter rising to the surface by reason of its lightness. That the cell-walls and casts are not the sole cause of this subsidence, is proved by the fact that individual oil-globules, quite free from these structures, are frequently found at the bottom of the vessel with the deposit. This subsidence is probably in some measure due to the quantity of the cholesterine entering into the composition of the fatty matter. Crystals of cholesterine sink in fluids of a specific gravity even some degrees above 1000.

I have not been able to detect cholesterine in the urine in any other morbid condition than in that above referred to. Although I have at present only searched for it in four cases of fatty degeneration, in consequence of the difficulty of obtaining sufficient quantity of the deposit to work upon, the circumstances which I have enumerated render it very probable that it is a constituent of the fatty matter present in the urine in all cases of fatty degeneration of the kidney.

I shall have occasion to describe elsewhere the characters of the fatty matter present in other tissues in a state of fatty degeneration; but I may remark here that cholesterine is a very constant constituent, and I have detected it in the large cells (*granular corpuscles*) containing oil-globules, which are abundant in the fluid of *ovarian dropsy, and sometimes in hydrocele*, and in that found in cysts generally;* in similar cells, which are common in *sputum*, and are derived from the surface of the mucous membrane of the bronchial tubes; in the cells which are frequently very numerous about the *small arteries of the brain* in cases of *white softening*, in those found in cases of the so-called *fatty degeneration of the placenta*, and in other situations.

Kiestein. Of this peculiar substance I can give you no very satisfactory account. Some years since, numerous observations were made by Nauche, and repeated by Dr. Golding Bird and several other observers, with the view of ascertaining if there was any foundation for the statement that, in pregnant women, certain elements of the milk found their way into the urine, and, after the lapse of a short time (twenty-four hours to five or six days), a thin pellicle consisting of fatty matter, a substance allied to casein, and crystals of triple phosphate, formed upon the surface. Some went so far as to say that the presence of this pellicle was sufficient to indicate the existence of the pregnant state. This statement has, however, long since been proved to have no foundation in actual observation. In some of the cases brought forward by Dr. Golding Bird, the pellicle was absent; in others, the pellicle was observed; and the conclusion he arrived at was, that in cases in which the pellicle was formed, it was due to the presence of certain constituents of the milk, which, from not escaping from the gland in the usual way, had been reabsorbed and separated from the blood by the kidneys. I have not unfrequently seen a pellicle composed of animal matter, in which vibriones and fungi were abundant; and crystals of triple phosphate formed upon the surface of various specimens of urine which had been left to stand for a day or two, both from the male and from the female. Whether this is exactly the same sort of pellicle as that said to form upon the urine of pregnant women, I cannot say; but it possessed the characters usually assigned to the so-called kiestein. The animal matter has not been satisfactorily isolated, and is in many cases undergoing decomposition. In the absence of more exact information, I think we can attach no importance to the presence of this pellicle in the diagnosis of pregnancy. It may be absent in the pregnant state; and it may be present in the male, and in the unimpregnated, as well as in the impregnated female.

Other Forms in which Fatty Matter occurs in Urine.

Urostealith. Dr. F. Heller reports a very remarkable case, in which small concretions, composed of fatty matter, were passed in the urine. The patient was a man, twenty-four years old, who suffered from symptoms of stone in the bladder. He passed several small solid bodies, which were found by Dr. Heller to consist of a peculiar form of fatty substance, to which he gave the name of urostealith. The man, who was treated with carbonate of potash, got quite well in a fortnight. This is the only case of the kind recorded (quoted in Dr. Golding Bird's work, edited by Dr. Birkett, p. 422; Heller's *Archiv*, 1844, s. 97, 1845, s. 1.)

Fluid Yellow Fat. Dr. C. Mettenheimer gives two cases in which large quantities of fluid yellow fat were passed in the urine. The first was a man suffering from cancer of the lungs, who was taking a tablespoonful of cod-liver oil twice a day. The second was that of a woman who was recovering from acute inflammation of the kidneys, and was taking a mixture composed of henbane and hemp. (*Archiv des Vereins*, B. 1, Heft 3.)

Fatty Matter in Rabbits' Urine. Dr. Siegmund found a quantity of fatty matter in the urine of rabbits to which cubebs had been given. The excretion of fatty matter continued as long as the cubebs were administered. After death, no morbid change was discovered. It disappeared when the cubebs were omitted, but reappeared when they were administered again. The same observer also found that, although cantharides and cubebs irritated the kidney, they did not diminish the proportion of urea excreted.

* The bodies described as *granular corpuscles, inflammation globules, compound granular cells, exudation corpuscles*, and known by other names, are really composed of a number of minute oil-globules, aggregated together in the form of a spherical mass which not unfrequently becomes invested with albuminous matter, resembling a cell-wall; but I believe that usually the albuminous material is deposited with the oil-globules, and therefore that no true envelope or *cell-wall* exists.

Erroneous Observations connected with the Presence of Fatty Matter in Urine. Numerous other instances, in which fat has been said to have been passed in considerable quantity, are on record; but there can be little doubt that, in many of these cases, the chemical characters of the substance supposed to be fatty were not carefully ascertained. There is reason to believe that the iridescent pellicle, which really consists principally of fungi, vibriones, and crystals of triple phosphate, from its general resemblance to a thin film of oily matter, was mistaken for fat. Many practitioners have been deceived in consequence of the admixture of milk with urine. This is not an uncommon practice, and we should be very careful not to be misled by impositions of this kind. It is hardly credible what trouble some patients will take to deceive us; and very often deception is practised and carried on for a long time without detection. From not being able to discover any reasonable motive, we are sometimes too ready to conclude that our suspicions are unfounded; and thus we may be led to believe statements which are really false, and report cases apparently of a very exceptional character, which only prove that great ingenuity has been employed for the mere purpose of imposing upon us.*

In Lecture IX, we shall examine those urinary deposits which I include under the head of light and flocculent urinary deposits. This class includes the different forms of epithelium from the urinary passages, spermatozoa, casts of the uriniferous tube, and many other bodies which are of great clinical importance.

Lecture

ON

SYMPATHETIC INFLAMMATION OF THE EYEBALL, AND ITS TREATMENT BY OPERATION.

By HAYNES WALTON, Esq., F.R.C.S., Surgeon to St. Mary's, and to the Central London Ophthalmic Hospitals.

Gentlemen,—A very grave result of wounds and injuries to the eye, is sympathetic implication, which has of late received much attention.

The subject was first practically recognised by Mr. Barton of Manchester, whose practice was brought before the profession by Mr. Crompton, in the *London Medical Gazette*, vol. xxi, p. 175. The sympathy must be produced by injury from extraneous bodies in the eye. In seven, a portion of copper had settled in the anterior chamber. Inflammation and disorganisation of the eyeballs were soon followed by failure of the functions of the other eyes, together with structural changes. Mr. Barton excised the cornea, and applied a poultice, in the hope that the copper-cap would escape; this did happen, and besides, produced great relief; but it had a greater and more valuable effect, it saved the destruction of the other eyes, although some of them seemed past all hope.

The evidence of this sympathetic action should be well understood, or disease may be attributed to sympathy, which is nothing but the same local manifestation of constitutional taint, that appeared in the other eye, and secondary only in order of time. I have known many mistakes to be made in this way to the great disadvantage of the patients. In traumatic cases the diagnosis is mostly simple. The injured eye manifests symptoms of irritation or disturbance, and there is the sign of acute or of chronic inflammation. This development of morbid action may be slight or very apparent, but is always to be discovered; and pain or soreness under touch is always present.

The sympathetic attack usually shows itself early, within a few weeks; but it may appear at any time, so long as the irritation produced by traumatic disease lingers. Mr. Wall of Paddington called me to a patient whose eye was fast failing, without any very apparent cause, the symptoms being impaired vision and spectra. The other eye had been wounded two years previously with a packing-needle, the cornea torn across, and sight destroyed. Paroxysms of pain and tenderness in it under touch convinced me that it was producing sympathetic disease. I was correct, and my treatment saved its fellow; it completely restored its functions.

There may be variation in the subjective and objective symptoms of the sympathetic attack. Then there may be no pain, or it may exist with great severity. Intolerance to light is the first common result. Some form or other of impaired sight is the most bad omen. Loss of local adjustment, incapability of sustaining vision on minute objects, loss of definitions generally called feeble sight, abundance of muscæ, spectra, flashes, stars, coruscations, inflammatory action, loss of pupillary movements, change of iris-colour, softening of the eyeball and shrinking, are the later manifestations. It would seem, then, that the morbid action travels from the retina forwards; and ultimately the whole of the ocular tissues become involved, atrophy being the termination.

A small lacerated wound of the eye, especially of the anterior part, and which, to all appearance, has involved only the cornea, the iris, and the crystalline lens, may, equally with very great lesion, induce sympathetic disturbance. It is difficult to understand how the smallest quantity of pus, a drop or two just behind the cornea, or a slight change of texture of some of the tissues of the eye, can exert so baneful an effect.

Blows without wounds or breach of surface, burns, and chemical injuries, are capable of producing that kind of action that may excite sympathetic ophthalmitis; and this shows that no importance is to be attributed either to the peculiarity of any kind of wound, or to the tissue which is implicated; and all we can say is, that a variety of existing causes produce morbid changes to which the sympathetic disease is due. I illustrate this by a case published in a paper in the *Medical Times* for October 28th, 1854, by my colleague Mr. R. Taylor, who contributed another communication on the same subject on the 4th of November. A contribution of my own will be found under the date of February 18th of the same year.

A man received a blow on the right eye from a piece of iron, but there was no wound of any kind. The sight was not injured at the moment, but began to fail soon after the accident, and was extinct in a year. About six years after the accident, the eye became inflamed and excessively painful. The pain continued for ten months, totally incapacitating him from work; and so severe, that for several months he scarcely had an hour of uninterrupted sleep. The other eye was excessively intolerant of light. He could not read large print, nor could he fix it on any object for more than a second or two. He was operated on, with complete relief from pain; and the sight of the other eye was restored perfectly in about two months. Mr. Taylor saw him five years after the operation, and the sight continued perfect. The remains of the right eye formed an excellent stump for an artificial eye, but he did not care to have one.

Inflammatory affections producing disorganisation of the eye may develope sympathetic disease. I have seen more examples of this induced from staphyloma of the sclerotica, the result of purulent ophthalmia in infancy, than any other cause. I subjoin a case that I noted down in 1857.

An ophthalmic hospital patient, aged 20, had purulent ophthalmia in infancy, and lost one eye. Staphyloma formed, and the growth had been gradually increasing from childhood. About puberty, it was painful, and for the first time the sight of the second eye got a little dim. Soon after this, a blow on the staphyloma produced a sharp attack of inflammation in it, attended with much pain. The dimness of the other eye increased, and redness appeared. From this period there had been a gradual deterioration of vision, with occasional paroxysms of pain and inflammation. When I saw him, there was a very large staphyloma of the sclerotica, and no trace of the cornea, but in place of it a small cicatrix, round which the staphyloma was very vascular, the vessels being disposed in remarkably regular radii. The eyelids could not close over the tumour. There was a purulent discharge. The condition of the failing eye was this. The cornea was rather reduced. The sclerotica was discoloured, and full of varicose vessels; the iris dull and shrunken; and the pupil adherent in several places. There was intolerance to light, and vision was very imperfect, although he could read.

There are not recorded many careful examinations of the morbid materials found in eyes that have set up sympathetic ophthalmitis. I therefore introduce this, which came under my notice in the hospital practice of my colleague Mr. R. Taylor. The details are in the *Transactions* of the Pathological Society of London, vol. vi, p. 302.

The patient was a woman, 70 years of age, whose eye was

* I am much interested in the question of the removal of fatty matter by the kidneys; and I shall be very much obliged to any one who will send me specimens of urine containing fatty matters in any unusual form, or reports of well authenticated cases.

destroyed by intense inflammation of the anterior chamber, which was completely filled with a solid cake of lymph. The lens was hazy, and its fibres presented the usual appearance seen in cataract at a not very advanced stage. Immediately under the capsule, both anterior and posterior, and imbedded in the superficial lens-substance, there was found a layer of peculiar bodies, varying much in form and shape. The predominant form was spheroidal, but many were of the most eccentric shapes. Under the polariser, several of the larger presented a distinct cross; in the smaller bodies, the cross was faintly marked, or absent. Tested with tincture of iodine, they assumed a deep blue colour, gradually increasing in intensity till they became opaque. In making the examination, every precaution was taken to prevent fallacy.

Cretaceous degeneration of the crystalline lens, and of its capsule, is no uncommon source of the sympathy; and in the numbers of the *Medical Times* above quoted are many examples from my practice. Osseous degeneration of these parts always produces the same effects. With such complete disorganisation of one portion of the eye, the rest of the interior is always spoiled, and vision lost. The altered lens and its covering are generally adherent to the iris. I have traced disturbance to have commenced from its becoming loose. At the end of the chapter, I shall further notice these and allied changes of other tissues, any of which may, I suspect, set up irritation.

No general treatment, no local application, no dietary system, is of avail in checking unequivocal sympathetic ophthalmitis. Nothing of the kind can be depended on; and, while I thus speak from my own observation, I endorse the statement of all trustworthy observers. The affection can be stopped, or subdued, only by surgical treatment. A portion of the eyeball must be removed, whereby the products which have been generated and have set up the irritation, or the cretaceous or ossified tissue which has acted as a foreign body, may be got rid of: or extirpation resorted to. When practised early, it works wonders. If adopted before the sympathetic action has induced palpable structural changes, it will be all effectual. At later stages, it may arrest progress, and stay the destruction. Even when the pupil has become adherent to the capsule of the lens, and the iris dull, I have seen the check. I have taken notes of so many of these cases, that I have ceased to record them.

I proved many years ago (and I think that I revived Mr. Barton's practice, which, so far as I can learn, had never been generally carried out in London by any one) that removing a portion of the eyeball will generally suffice, as it is frequently in the anterior of the eye that the centre of the morbid action is seated. The intensity of it is more common near the point of injury, and this is mostly in the front of the organ. I have over and over found the vitreous humour healthy; this portion of the eye, therefore, not being spoiled. With the reduction of the eyeball only, the deformity is very much less, and the case is better fitted for an artificial eye; and, in the early years of life, the destined growth of the orbit is less interfered with. When the entire eyeball is disorganised, the posterior as well as the anterior, especially when there is staphyloma scleroticæ, or general enlargement, extirpation is the course to be adopted.

I perform the lesser operation, that of reducing the eye—"abscission"—in this way. The eyelids being retracted, I transfix the cornea, or the staphyloma cornea, as it may be, with a cataract-needle, or the curette; and cut it off close to the sclerotica with a small scalpel, gently and rapidly. When I think it requisite, I make the amputation a little behind the cornea; and then the iris, or whatever remains of it, is excised. Should the lens be present, whether opaque or not, I remove it. If I find the vitreous humour healthy, I try to prevent its escape by gentle manipulation and rapid closure of the eyelids; and sometimes none of it is lost. What should follow is very important. There is no more necessary step in the whole proceeding, and without it there may be copious bleeding and suppuration in the stump. I place a roll of cotton wool, or what is next best, a pledget of lint, quickly on the closed eyelid; maintain it with a bandage, and keep it there for two or three days; and afterwards apply straps of plaister. Healing is effected by the cicatrising of the cut surface, and its rapidity depends on the healthiness of the vitreous humour. It is not unusual to find the parts sealed up in a week.

The more the eye is diseased, the quicker and the more copious is the bleeding. It is this tendency to hæmorrhage that has induced some surgeons to speak disparagingly of the procedure; but if it be adapted to the proper cases, I am sure that patients will be the gainers, greater benefits will be conferred—the object and end of all surgery. When the bleeding is from the vessels in front of the eye that have been cut through in the operation, it can easily be restrained, and is never of any consequence. When it is internal, it may for the most part be stopped by the compress. I have long been convinced that the source of this internal or intraocular hæmorrhage is not the central artery of the retina, as generally supposed, but the choroid; and my opinion has been publicly stated for years. More extended observation has strengthened my views. There is always a previous escape of the unhealthy vitreous humour, and the removal of pressure or support from the diseased choroidal vessels causes rupture of them. I have seen the whole of the vitreous humour thrust out by clots, the retina hanging in shreds in the wound.

Perhaps in some cases, by the removal of the front of the eye, so much support is taken from the diseased choroid, that the bleeding forces out the vitreous humour. Much internal hæmorrhage ends in total collapse of the eye, and necessarily the process of recovery is retarded.

"Extirpation" of the eyeball within the ocular sheath is what would be called a more brilliant proceeding than "abscission"; and there can be no doubt that, although the operation, so far as the practical surgery is concerned, is more prolonged and severe, the recovery may be more rapid, and the general effect perhaps less. Yet I am quite sure that, if the patient's ultimate welfare be considered, its adoption should be the rare exception. Even a button of collapsed tissues is far better than not any, and a slightly reduced eyeball is vastly superior to an empty orbit; and I think it better that these should be secured, if it be even at the expense of longer time. But will the "abscission" confer advantages equally lasting with "extirpation"? is a question likely to arise in the mind of the practical man. Answering from my own experience, I say, Yes. In no case in which I have selected it as the proper operation have I been disappointed. Were I to write pages, I could not express more. I will just mention here, in connexion with hæmorrhage, that I have seen smart bleeding from the ophthalmic artery after "extirpation", requiring firm compress to stop it.

"Sympathetic ophthalmitis" might be spread out to a great length, and extensive details given; but I think that I have said enough to guide the student, and to develope inquiry. There are yet many points about which I am seeking information, among which I am searching after the conditions that the ophthalmoscope may reveal to us in the early stages of it.

Original Communications.

ON THE ACTION OF MERCURY UPON THE LIVER.

By Thomas Inman, M.D.Lond., Physician to the Liverpool Royal Infirmary.

Circumstances have induced me lately to investigate the action of mercury upon the liver; and as the inquiry has led me to important results, I think it right to communicate them to others.

So far as I can learn, it is an almost universal belief, both amongst doctors and patients, that mercury has a special influence in increasing the secretion of bile; and when this idea is put into definite words, the formulas run thus: all mercurials act on the liver; blue pill stimulates it; a small dose of calomel irritates it; a large dose "emulges" it; while grey powder corrects its secretion. Acting on this belief, mercury is used in every form of hepatic disease. One patient with too much bile takes calomel to carry it off; another with too little takes blue pill that he may carry off the proper amount. Too big a liver is treated with mercury to reduce its size; and too small an one (as in cirrhosis) is treated with the same drug, that its bulk may be increased; and if the bile goes the wrong way, and reaches the skin or the stomach instead of the bowels, mercury is given to bring it back. To challenge such belief, is certain to draw down upon the inquirer the title of visionary theorist; yet the name will be undeserved, for those only are theorists who ignore opposing facts, and they are essentially the practical men who rigidly seek after truth, and refuse credence to insufficient evidence.

Let us, in the first place, examine the grounds for the

general belief we have adverted to. They seem to be the following:—

1. Universal belief, and the assertions of learned physicians.
2. When a man feels bilious a dose of blue pill relieves him.
3. Calomel and blue pill purge a man, and under those circumstances an unusual quantity of bile is supposed to be found in his stools.
4. Calomel in children produces green stools, and these clearly are vitiated bile.
5. Clayey stools are undoubted evidence of an absence of bile in them. When a man who passes clayey stools takes a dose of blue pill his stools become brown again.
6. Opium produces clayey stools when given alone; but if given with calomel, this effect does not ensue.
7. That calomel is and has been largely used and highly eulogised by physicians in the hepatic diseases common in hot climates.

Ere we state the evidence on the other side, we must dispose of these statements.

1. Universal belief and general assertion is no solid foundation on which to build a theory and establish or disprove a fact. At one time there was not a single human being who did not believe that the sun travelled round the world every day; and there were vast multitudes who considered the fact proved by the assertion of the sacred writers. Now, on the contrary, all who entertain the ancient notions, and assert that the Bible teaches astronomy, are looked upon with feelings akin to pity. Human beings are as liable to err now as ever, and our age is not immaculate.

2. That blue pill relieves biliousness, is no proof of the action of mercurials on the liver: first, because there is no evidence that the sensation to which that term has been applied, depends in any way upon the bile, the liver, or the increase or decrease of the hepatic secretion; secondly, we deny that blue pill alone gives more comfort under the circumstances than any other purgative; but, granting that it is so, this is not proof that the drug acts beneficially on the liver; thirdly, there is direct evidence, which we shall adduce by and bye, that blue pill, calomel, etc., has not the action it is presumed to have.

3. The third point is one of considerable interest. There can be no doubt that calomel produces purging; and, for the sake of argument, we will assume that more fluid bile is found in the stools; but is that a proof that the calomel acted on the liver? By no means. Calomel appears to have a locally irritating or stimulating effect; for we have it frequently applied to the eye in various diseases, much as we use blackwash to a venereal sore. We may well, therefore, believe that it may irritate the stomach and bowels; but we are at a loss to see how the drug is to work its way backwards through the gall-ducts from the bowels, and so to reach the liver and stimulate it. If the answer to this be—That the drug is absorbed by the portal circulation, and thus reaches the liver, the reply is, by asking, How? seeing that the drug is insoluble, and cannot easily get into the portal circulation at all? The usual theoretic and very flippant answer to this is—That the chloride is converted into the bichloride in the stomach or bowels, and that this, being soluble, may enter the veins. But this reply is manifestly absurd, for if the conversion spoken of should ensue, the amount of calomel would be quite sufficient to poison the patient; and if the effects are dependent on such a change, how absurd and unphilosophical is it not to give the bichloride at once in a definite dose. This is not done, it is said, because corrosive sublimate does not affect the liver as calomel does. What, then, becomes of the conversion theory? and what becomes of the assertion, that the calomel reaches the liver, and irritates it?

But it is asserted, that the motions passed after the use of the mercurial, contain more bile than usual. What is the proof of this? I have sought in vain for analyses of calomel stools; or, indeed, any definite observations on the amount of material excreted. Before we can allow the correctness of the statement, we must know, first, what the liver naturally secretes; secondly, how much of this goes with the chyme into the blood; thirdly, how much passes away as excrement; fourthly, how much bile is formed after calomel has been taken, and how much passes into the blood, and how much into the stools.

We may find that calomel prevents any bile from passing into the blood with the chyme, and diverts it all into the stools; if so, there may be more bile in them, though the liver positively secretes less than usual.

Dr. Scott's experiments distinctly show that calomel, while it purges, does positively diminish the hepatic secretion; and a moment's thought convinces us that it should be so. Increased secretion requires an increase of material, from which the secretion can be formed; for the liver, the supply comes through the portal veins. These bring blood from the mesenteric capillaries; and these again during purging are constantly having the amount of blood in them reduced by the secretion from the bowel; consequently, the supply of blood in the portal vein must be materially diminished by purging, and sound sense prevents us from believing that the liver can answer an increased demand on a deficient supply.

It is clear, then, that purging, even if bilious material should be present, is not proof of increased secretion from the liver. The following consideration seems to demonstrate this.

The amount of bile secreted by a man weighing one hundred and sixty pounds, has been estimated at sixty-six ounces per day (see Beale's *Archives of Medicine*, part III, page 214), or about four pounds avoirdupois. The amount of feculent matter passed by the same individual, if solid, will be about a pound. Three pounds, therefore, of the bile have been removed, either as water or as an ingredient in the chyle.

Give to such an one a dose of calomel, and supposing it purges him, he will not pass more than four pounds of feculent matter; and what is this but the ordinary solid stool diluted. In such a case, more bile appears to be present, simply because its watery part has not been removed. But a purgative increases the intestinal mucus; consequently, there will be in every loose stool an unusual quantity of a serous fluid and mucous epithelium, and this will dilute the bile more largely.

Judging from such observations as I have been able to make, a simple calomel purge removes about two pounds of feculent matter; and a purge of jalap, scammony, or croton oil, removes about the same under ordinary circumstances.

The necessary inference from this is that, after the use of calomel—and the same remarks apply to blue pill—there is evidence of deficiency of bile, and that the fluid motions do not represent as much solid biliary matter as would a healthy motion diluted with three times its weight in water.

This consideration I do not remember to have seen referred to, yet it must always modify the conclusions we might otherwise draw, if we considered *quantity* in the stools rather than *quality*.

3. The amount of weight to be given to the evidence of calomel producing green stools in children, is infinitely small. The statement, indeed, must be considered as utterly worthless to demonstrate the action of mercury on the liver; for my friend Dr. Petrie, of this town, informed me sometime ago, that he had examined the bodies of many children who had died while taking calomel, and after passing the characteristic green stools. He found on all occasions that the liver and gall-bladder were in a natural condition; that there was no green colour in the upper part of the bowels; that it was faint at first, and gradually deepened towards the rectum; and that on scraping off the secretion, it was evidently a production of the mucous membrane of the bowels, and not of the liver at all.

But why, it is asked, does the calomel produce it? We know not; but when we remember that bad food, poor milk, teething, and a variety of other causes, will produce green diarrhœa in infants, we may fancy that the stools in question are akin to these, and that what will explain the one will equally explain the other.

5. The fifth and sixth statements may be taken together; they are entirely based upon the significance of clayey, pasty, yeasty, or whitish stools; and the effect mercurials have in changing their colour. It is assumed that these stools can contain little if any bile; but if we examine this assumption closely, we find that it resolves itself into this, that the motions in question contain none of the *colouring matter* of the bile. If, then, we assert that the stools contain the usual amount or even an excess of cholesterine and bile-acids, though they do not contain the colouring matter, and there is nothing to disprove this, the value of this evidence is reduced to this, viz., that mercurials promote the secretion of *coloured* bile.*

* If we turn to Carpenter's *Physiology* (third edition, page 455), we find at the latter part of his description of the ingredients of the bile, the following statements. "The proportion of cholesterine in healthy bile appears to be very small; but in many disordered states, this component is present in much larger amount. The colouring matter of the bile is a substance distinct from the preceding: that of the ox and other graminivorous animals, appears to be identical, or nearly so, with the chlorophyll of the leaves on which they feed; but that of the human bile seems to possess different properties, and to be derived from the proper constituents of the blood."

For some very interesting statements respecting the colouring matter of the bile, and its apparent independence of the rest of the secretion, see Frerichs *On Disease of the Liver*. (New Sydenham Society's translation pp. 89-90, 94-5-6, and notes.)

If we examine into this part of the subject closely, we shall find much food for thought. We note—1. That people living upon bread and milk pass motions free from colour, and this for so long a period that we must either believe that the liver for them is useless, that milk-food produces a colourless bile, or, at any rate, that a colourless bile may be formed by the liver.

Now, as milk contains a considerable quantity of oil, and as fat bacon is supposed to have something to do with neutralising bile, without at the same time producing white stools, we must either give up our idea of the effects of fatty food on the colour of the stools, or modify it very materially. As milk given to an infant is attended with bright yellow motions, and, when given to an adult, is attended with white ones, may we not fairly surmise that the quality of the bile is not the same in the two; always assuming that the liver acts as a secreting organ, whether people live on milk or other foods? This fact, at any rate, is certain, that if the liver acts at all in a man living on bread and milk, it produces a bile which does not give the stools a brown, green, or yellow colour. As all experiments show that no internal organ can be completely dispensed with, and health be retained, and as the history of acholia shows that the liver is no exception to this, we must conclude that the liver does act in milk-eating people.

If, then, it be once accepted as a reliable fact, that the liver may secrete a colourless bile, what becomes of the argument which assumes that the colour of the stools is an evidence of the amount of bile they contain? And if it be allowed that milk-eating people conserve their health, it cannot be argued that pale stools are necessarily a proof of hepatic disease?

That pale stools generally attend jaundice, there is no doubt. That jaundice is commonly attended with deeply coloured urine, is equally certain. Frerichs tells us that, in such urine, bile-solids and bile-acids cannot be found, but bile-colour can be. (P. 96, note.)

We may assume, then, that in jaundice it is possible the colourless parts of the bile go into the intestines, while the coloured parts pass into the blood, etc.

The assumption that mercurials restore the healthy colour of the motions, is one open to much doubt. That they seem to do so in some instances, I cannot deny. But I assert—1. That I have used mercurials without the healthy tinge returning. 2. That I have used no medicine, and the colour has been restored. 3. That for one case in which "mercury corrects the secretions", there are six in which it does not. Still farther, that, as the common direction given by authors, and the practice followed by doctors, is to persevere with the mercury *until* the desired change is effected, there is reason to believe that, when the mercury does really seem to act, the change must be regarded as a *concomitant*, and not a *consequence*, of the medicine.

That opium locks up the secretions of the liver, is no better ground for theory—1. Because opium-eaters pass natural stools. 2. That an overdose of the drug does not produce symptoms resembling acholia. 3. That, in deaths from poisoning by opium, no perceptible change is to be met with in the bile or in the liver indicating that its functions have been suspended. 4. That white stools occur when neither milk nor opium has been taken, and where there is no jaundice. 5. That, at the outside, the fact can only be taken to prove that opium influences the chlorogenic function of the liver, as it is supposed to influence the glycogenic.

Of the influence of calomel on the liver in cases of Asiatic cholera, we forbear to speak, as the facts recorded do not warrant us in saying whether the mercury cured the cholera, or the calomel began to act because the disease for which it was given abated.

7. We cannot deny that calomel has been largely used for liver-disease, and highly eulogised by physicians in hot climates; and we readily allow that "distance lends enchantment to the view," and that there is some truth in the proverb, "Omne ignotum pro magnifico".

Nevertheless, we boldly and emphatically deny that the testimony thus given is reliable. We aver that the diagnosis of liver-disease current in the East has been, and still is, a false one; and that the superstructure built upon it has been deadly. Calomel is the bane of Indian medicine, not its handmaid. This statement may seem bold in one who has no individual knowledge, yet it is fully borne out by many friends who have such experience.*

These being the arguments and statements on which the current belief is founded, we must now examine those on the other side, which point to a directly opposite conclusion.

We first turn to the symptoms exhibited by those who come in any way under the influence of mercury, reasonably expecting to find that there will be phenomena as characteristic of this metal as colic and wrist-drop are of the action of lead, and necrosis of the jaw is of phosphorus. Those most exposed to mercury are looking-glass makers, mercury-miners, and gilders, and seamen in ships carrying quicksilver; and, in one remarkable case, the whole crew were affected, from crude mercury having escaped from the bags containing it. In all these, the characteristic symptoms produced are salivation and mercurial tremors; and we find no reference whatever to any alteration in the hepatic function. Surely, if mercury had any specific action on the liver, one case, at least, would show an affection of that organ.

It may be alleged that this argument is valueless, because mercury introduced into the body in fumes is not the equivalent to mercury when given by the mouth as blue pill and calomel. A short consideration, however, shows this argument to be untenable: first, because there is no distinction between the effects of mercury when taken in fumes, when rubbed in through the skin, or when absorbed by the bowels; all alike produce salivation and nervous exhaustion. Second, there is no essential difference between blue pill and mercurial fumes; both consist of the metal in a finely divided state.

We next turn to the experience we acquire of the action of mercury when given in doses to induce salivation. We find that it causes griping, purging, low spirits, nervous debility, impoverishment of blood, and salivation. We find Dr. Porter and Mr. Pearson describing such symptoms as mania, apoplexy, hæmorrhage, "erethism", "sudden death", dysenteric diarrhœa, palpitation and irregular action of the heart, erythema, roseola, ecthyma, and many others; but no observer records anything approaching to excessive biliary secretion, or any specific action of the liver. A specific action on the salivary glands being present in nearly every case, surely, if the drug had a specific action on the liver, its existence could be as readily demonstrated.

From this point we turn to the action of mercury when given in a poisonous dose. We argue, if a small dose of calomel irritates the liver, a large one must irritate it still more; or, if it does not *irritate* it, it must surely overwhelm and destroy it; or if, as routine urges, we believe that a large dose "emulges" the liver without irritating it, we should, at any rate, find a vast amount of bile in the intestines after an overdose of the drug has been administered.

Refer now to Taylor, *On Poisons*, 1st edit., p. 389, where there is a case of death after the use of two grains and a half of calomel daily for five days. Salivation ensued; and the *post mortem* revealed gums ulcerated; mucous membrane of tongue, mouth, and fauces, intensely irritated; left kidney enlarged, right small; but the account makes no mention either of the liver or of bile.

Turn to Pereira. Five persons are quoted as having experimented on dogs, pigs, and horses, without remarkable results; clearly none were referrible to the liver. Dr. Beaumont, putting twelve grains into the stomach of a man, caused "commotion, slight nausea, and the secretion of a white frothy fluid running at the aperture, like fermenting beer from a bottle". Swallowed in small doses, Pereira says it "occasionally excites no obvious effects, though more commonly it acts as a purgative"; and that this is pretty close to the truth, we infer, because few practitioners of the old school ever give calomel as a purgative without joining it to jalap, or following its use by a senna draught, to "carry off" the bile and physic together.

Pereira then quotes Gölis, who states that he has many times seen calomel, given for hydrocephalus and croup, produce *enteritis*, which rapidly passed into gangrene. Then follow cases in which calomel had produced intense salivation, mortification, and death; and one in which, three drachms being given, "it was followed by only one copious evacuation, and that not till after the use of an injection".

In no case is there any evidence whatever of excessive biliary action.

Turning from Pereira's account of calomel to his description of the effects of other mercurials, the same broad facts are apparent; viz., that the specific action of the metal is upon the

* Reasons which may readily be divined induce the writer to withhold particulars on this point; and he does so the more readily, as he believes that in the course of time the conclusions which he thus hints at, will be definitely established, provided his correspondents conserve their health and vigour.

mouth, salivary glands, fauces, and intestines; and that it has no such action upon the liver at all.

From the philosophic certainty given by the preceding considerations, we turn to direct experiment, and find in Dr. Beale's *Archives of Medicine*, No. 3, a most important series of observations made upon a dog by Dr. Scott. The first operation was to open the abdomen, and establish a direct communication between the bile-ducts and the abdominal wall, by which means all the hepatic secretion was passed into a receptacle provided for the purpose; and the greatest care was taken to guard against all possible sources of fallacy. The amount of calomel administered in the four experiments was three, six, ten, and twelve grains respectively. The following was the result. The daily average for two days prior to the first dose of calomel was 1960 grains of fluid bile; the daily average for two days after the calomel was 1358. The calomel on this occasion did not purge, but it *reduced the biliary secretion one-third.*

When six grains were given, the dog was purged twice within four hours. Prior to the dose, the daily average of fluid bile was 1639 grains; after the dose, the amount was 518 grains. The calomel had *reduced the biliary secretion nearly two thirds.* After ascertaining that the reduction in quantity was not due to other causes, a third experiment was tried.

Before giving the third dose of calomel, the daily average of bile was 3044 grains. Ten grains of the drug were used; it was uncertain whether it purged the dog, but it reduced the fluid bile to 2720 grains.

On the fourth occasion, twelve grains of calomel were given, and the dog was purged copiously. Prior to the drug being taken, 2658 was the daily average; after it, the secretion only reached 1724. *The bile was diminished one-third.*

The results then were, *that in every case the hepatic secretion was diminished by calomel, and the diminution was most conspicuous when the drug acted as a purgative.* Taking together the two experiments *where no purging ensued, the diminution was one-fifth of the whole;* taking those *where purging was present, the loss of bile amounted very nearly to one-half* (4297 to 2242)—a conclusion which strict analogy has previously led us to expect.

Against these experiments, one objection only can be taken; viz., that Kölliker had made three observations previously, in *one* of which the bile seemed to be increased, while it was diminished in *two*. Giving the full value to this objection, the conclusion we must still come to is, that *the chances are six to one that calomel will diminish the hepatic secretion, and that it will diminish it proportionally to its purgative action.*

With this mass of evidence before us, it is impossible for us to subscribe to the popular belief that calomel increases the secretion of the liver; and, as the action of this drug does not essentially differ from that of other mercurials, we conclude they operate much in the same way. Truth, in this instance, appears to lie in a directly opposite quarter to that in which it is generally supposed to do.

But it will naturally be asked, "Now that you have deposed mercury from the province where it held sway so long, what other province will you assign to it? What *does* mercury do?" Any one can answer the question for himself by taking the drug systematically. We may sum up the experiences thus. Taking calomel and blue pill as the type for other preparation, mercury depresses the nervous system, producing sickliness, faintness, and a tendency to tears; it irritates the stomach and bowels, producing anorexia, flatulence, griping, and purging, with thin, watery, and diluted stools, instead of rich and solid ones; it diminishes the red particles of the blood, and reduces greatly all muscular power; it promotes suppuration, commonly gives rise to inflammation of the salivary glands, and ulceration or gangrene in the mouth.

Such is the dark side of the picture; yet there is a bright side too. I am not arguing against the use of the metal, but against its abuse. That mercury is a powerful weapon in the physician's armoury, I readily allow; but it is the Congreve rocket of medicine. When properly aimed and true in flight, nothing is equal to it; yet it is sometimes so erratic in its course, and its effects are so different to those it was intended to produce, that it is gradually losing the confidence of those who cultivate philosophic precision.

We may often assist our conclusions respecting one thing by putting it in apposition with another. Calomel, it is said, specially irritates the liver. Do we know any other drug likely to do so? Arsenious acid, so far as we know, irritates *every* organ it comes in contact with. Taylor tells us that, when given in large doses, a much greater amount is found in the liver than in any other part of corresponding bulk; yet no one has ever attributed to this material an effect on the hepatic secretion similar to that which they attribute to mercury. The corollaries to be drawn from this are too obvious to require enunciation.

SCROFULOUS DISEASES OF THE EXTERNAL LYMPHATIC GLANDS:

THEIR NATURE, VARIETY, AND TREATMENT.

By P. C. Price, Esq., Surgeon to the Great Northern Hospital; the Metropolitan Infirmary for Scrofulous Children at Margate; etc.

III.—Tuberculous Disease of the External Lymphatic Glands.

[*Continued from page* 795.]

Pathological Changes. Tubercle may occur in the lymphatic glands under two distinct forms, either as semitransparent, grey, crude granulations, or as more or less yellowish lardaceocaseous material, similar to that which so constantly involves the lungs. Although grey, semitransparent, crude tubercle is found affecting the structure of lymphatic glands, still it is of very exceptional existence. Louis states that, in all his examinations of tuberculous glands, he never once met with it, though Rokitansky admits that it may coexist with yellow tubercle, which is, *par excellence*, the form which invades these special organs. I think I have never myself recognised grey tubercle alone, or even mingled with the yellow, in any of the lymphatic glands I have examined; and, from the observations of those still more experienced, I am inclined to believe that its presence is seldom to be determined.

When tubercle invades the structure of lymphatic glands, it is, as just mentioned, in that form identical with the yellow caseous deposit formed in the lungs of phthisical patients. In most structures, this kind of tubercle presents itself as *tubera* or rounded bodies; but, as Mr. Simon has truly observed, tubercular deposit in the lymphatic glands does not show itself at first in a spherical or tuberous form.

It may be seen under various phases, according to the size and nature of the gland-organ it involves, the condition of the individual in whom it occurs, the length of time it has existed, and the influences to which it has been exposed. At an early period of its existence, more or less of the glandular structure appears to be infiltrated or patched with the foreign material in the shape of a yellow, or yellowish-grey, cheesy, half-dry substance, which, to a greater or less extent, leads to destruction of the organ.

Although the word *infiltration* has been used as descriptive of the manner in which tubercle involves the glandular structure, yet at a later period, provided unhealthy action continues, the morbid material so completely transforms the natural tissue that the term inadequately conveys the process that takes place. But, beside the gland-tissue immediately implicated by the deposit, that in close relation with it oftentimes assumes a more or less altered condition. Slight vascular excitement seems to pervade the still healthy structure, preparatory, as it were, to admitting the deposition of the tuberculous substance. Thus, on splitting open a gland known to be in an advancing tuberculous state, the proper structure will be found more or less implicated in various places. Sometimes the foreign material is merely seen scattered about in lines or patches; on other occasions, small patches are extending by a more extensive grouping; while not unfrequently nearly the entire gland is plugged up by the masses which appear to be undergoing a general fusion.

Prior to the deposition of tubercle in a previously healthy gland, some slight enlargement generally ensues; but it is not till a later period that the size of the organ is very perceptibly increased. Enlargement may depend either on the swelling of the true glandular tissue, the result of direct irritation, or from real accession of bulk by reason of the tuberculous formation. Frequently such enlargement is dependent on both circumstances combined; for otherwise it would be difficult to account for the extraordinary size to which the lymphatic ganglia thus affected sometimes attain. The true tissue of an implicated gland is frequently so involved, as the disease advances, as to be entirely displaced by the morbid exudation, and so form around it merely a distinct capsule or zone, which becomes in

turn destroyed as more extensive implication ensues. Tubercle deposited in the form thus described is susceptible of various transformations, which may be included under the following heads: withering, calcification or cretifaction, and softening, with subsequent liquefaction.

Under certain conditions, a special alteration takes place in the tuberculous deposition of lymphatic glands, which consists of what has been termed *withering*, or a conversion of the foreign material into a shrunken, dry, shrivelled mass. Such a change has been considered by Baudelocque and others to have occurred in instances in which iodine has failed completely to reduce the glandular enlargement which has been supposed to accrue from tuberculous deposition. Such a process is, however, more frequently seen taking place in the metamorphosis of grey tubercle, which, as before mentioned, is of comparatively infrequent occurrence in the lymphatic system.

Calcification or cretifaction occasionally leads to incomplete resolution of tuberculous glands; but it is uncommon to see such change occur in those glands which have an external or superficial situation, although a more or less gritty condition is sometimes to be observed. Cretifaction or mere ossification, as is well exemplified in several preparations in the Museum of the Royal College of Surgeons and various metropolitan hospital museums, is much more frequently seen taking place in the bronchial and mesenteric ganglia.

Among one or two isolated examples of calcification of tuberculous deposit occurring in superficial absorbent glands, I find mentioned in my notebook the case of a gentleman who has had one or two of the lymphatic glands situated beneath the base of the lower jaw on either side involved by tubercle at various periods during the past five or six years. The glands on the right side were first affected, and, after enlarging, ulcerating, and suppurating for some time, gradually became destroyed, but not till numerous portions of a chalk-like substance had come away, mingled with the discharge. In the course of the time mentioned, the glands on the other side became similarly destroyed. But this is almost a solitary case, and it is seldom that the surgeon is able to record such a definite one. Lebert mentions but two; and Baudelocque only one, and in this instance the glands so involved were situated in the armpit.

Instances of complete osseous transformation of cervical glands in a tuberculous state have been occasionally recorded, but I have never seen a case out of many hundred examples of glandular tuberculosis which have fallen under my notice.*

By far the most common form of alteration that ensues in tuberculous absorbent glands situated near the surface of the body is softening, ending in liquefaction, suppuration, or phthisis, as it is called by some authors. Experience teaches that, in the majority of cases in which the disease is severely marked, the general health bad, and the constitutional powers low, by reason of indifferent and scanty supply of diet and exposure to vicissitudes of temperature, there exists an especial tendency to this kind of destruction. In one hundred and forty tabulated cases of apparently tuberculous disease of the cervical glands which occurred in children in the Children's Infirmary at Margate, up to the age of sixteen years, no less than eighty-two cases suppurated; and it is probable that, had the remaining fifty-eight continued under observation for several months longer than they did, ulceration and suppuration would, in a certain number, have supervened. At any period after the deposition of tubercle, this process may commence; but it is generally protracted; and sometimes months, and even years, elapse before it exhibits a tendency to commence. I have, however, seen instances in which rapid destruction ensued, by reason of softening and liquefaction of the tuberculous matter, just as is sometimes met with in cases of rapid, or what is vulgarly known as "galloping", consumption. Softening of a tuberculous mass usually commences near its centre, provided no inflammatory or destructive changes are taking place in tissues bordering its margins. The process and its subsequent stages are thus described by Mr. Paget: "In the proper softening of tubercle, one sees its central part become first soft, so that, when cut across, it looks cracked and crumbling, and may be pressed away from the surrounding firmer part, leaving a little central cavity. In further stage of degeneration, it becomes liquid, like thin pus, with flakes or grumous particles in a pale yellowish turbid fluid; and as the change makes progress, the whole tuberculous mass may be reduced to the same liquid state." (*Op. cit.*, vol. ii.)

Such is the process that usually takes place; but it is often modified. The softening and liquefaction may be partial, affecting merely a single island of tuberculous matter, and not reaching to other isolated patches; or, so soon as liquefaction has commenced, the fluid portion of the softened mass may be absorbed with such soluble products as are held in solution, the insoluble parts being left as foreign material in a more or less oily, chalky, and cheesy condition. Should such be the case, it is probable that the affected gland, with its coverings and connecting tissues, will show but slight signs of irritation or inflammation, at least, not sufficient to endanger ulceration and suppuration.

More frequently, however, by the destructive processes that ensue, the affected gland is converted into a more or less complete abscess; and this having obtained, Nature endeavours to get rid of the product of disease. Coincident or somewhat subsequent to these changes are certain alterations in the tissues situated external to the diseased gland. The cellular bed in which it reposes shows signs of irritation and inflammation, which are soon propagated to the adjacent skin. Adhesions between the tegumentary, cellular, and glandular tissues, now ensue, accompanied by a more or less general destructive action, which eventually admits of thinning and perforation, so as to allow the escape of the liquefied contents of the destroyed gland.

The various progressive steps of cellular and tegumentary inclusion have been well described by the late Mr. William Goodlad, who paid great attention to the subject (*On the Diseases of the Absorbent System, etc.*: 1814). The rapidity with which the structures adjacent to the affected gland are involved varies in accordance with the amount and character of the glandular mischief. Sometimes it is exceedingly rapid; at other times, and more frequently, slow, but steadily progressive.

Ulceration, or the natural mode of allowing communication between the external tissues and the affected gland, may take place in two distinct ways, either at several points on the surface, or by the formation of a large ulcerative opening at that part in which the covering textures have become thinnest. The former process is the one usually observed in cases in which the disease has been of a decided chronic and tardy character, although it may occur when the morbid action has been more rapid and decisive, as is well observed in a case of a patient, a boy, aged sixteen years, under my care at the Blenheim Free Dispensary. The glands, five or six in number, on both sides of his neck, became suddenly enormously enlarged, and, after remaining so for about six weeks, showed symptoms of destructive inflammation; and within a few days rapid ulceration took place in the greater proportion at various points on the surface, which admitted the oozing out of a thin grumous-looking semipurulent fluid, with shreds of tenacious lymph.

When a larger portion of the integument is destroyed, the constitutional and local disturbance is generally much greater. I have frequently seen the most unhealthy-looking sores formed in this way, which have not healed till the entire diseased gland has been removed, and appropriate remedies applied, with renovation of the general health.

The recognition of the discharged contents of a suspected tuberculous gland is not always so clear as to enable the pathologist to decide as to the positive existence of tuberculous or merely simply modified inflammatory products. The analogy between these morbid productions is often so strong that even microscopic aid is sometimes insufficient to distinguish them; while discriminative recognition of the degenerative forms of scrofulous lymph is still more difficult. Tuberculous matter from the cervical glands has been frequently examined chemically. Its elementary components consist of carbon, hydrogen, nitrogen, and oxygen, which exist, according to M. Scherer, in the following proportions:—C^{46}, H^{73}, N^{12}, O^{14}. (*Chemische und Microscopische Untersuchungen zur Pathologie.* Heidelberg: 1847.)

Tuberculous matter examined quantitatively by MM. Lombard and Thénard gave the following results:—

Animal Matter	98.25
Muriate of Soda Phosphate of Lime Carbonate of Lime	1.75
Iron	Traces
	100.00

* MM. Henry and Gmelin found that the cretaceous substance into which tuberculous matter of the lungs and lymphatic ganglia degenerates to be composed of carbonate and phosphate of lime, phosphate of ammonia and magnesia, and some animal matter.

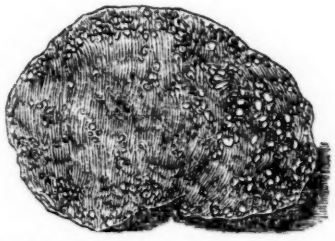
This analysis must not, however, be looked upon as very satisfactory, and exhibiting the true chemical composition of tubercle in its various transformations. It is only an approximate rendering of the components of crude tubercle. The animal matter, which forms by far the largest proportion of tuberculous deposit, consists of fibrine, albumen, and gelatine, in varying proportions, the former and latter being generally in greater quantity.

The microscopical analysis of glandular tubercle is almost analogous with that occurring in the lungs. If a portion of ordinary yellow tuberculous deposit be placed under the lens, more or less granular matter, mingled with molecular oil, will be seen. Considerable quantities of imperfectly formed exudation-cells, of various shapes, more or less irregularly developed, will be detected in the basis-substance, mingled with nuclei or cytoblasts of different forms and conditions.

The above description is well illustrated in the beautiful drawings of Schrœder Van der Kolk. This account merely, however, refers to tuberculous deposit as it is found in glands ere it undergoes various transformations and alterations; for there will then be discovered fresh conditions, in accordance with the nature and character of the metamorphosis.

Before adverting to the ulcerations which occur in connexion with suppuration of tuberculous glands, it may be well to give passing consideration to the liability possessed by already implicated glands to assume a tuberculous condition. When speaking of enlargement of lymphatic ganglia through simple inflammatory changes, it was remarked, that not unfrequently such a state was rendered more serious by reason of a subsequent development of tubercle. I have now before me a specimen illustrating this susceptibility. The gland is from the cervical region, and was removed from a female, on account of the pain and disfigurement it occasioned. It existed for some years. On opening it after its removal, a beautiful illustration of tuberculous deposits was afforded. The inflamed condition of the altered structure of the gland in relation with the tubercle, and the ulcerated spots which the foreign material had caused, by reason of its deposition creating irritation, etc., was easily traced. I have seen several similar specimens, but in no other were these various changes so well displayed.

The accompanying woodcut shows, as far as a wood-engraving can do, the appearances presented by the tuberculous matter infiltrated through the gland.



There is but little doubt that, in a certain proportion of instances in which tubercle involves lymphatic glands, the primary mischief has chiefly consisted in chronic hypertrophy from vascular derangement, and that eventually a more precise morbid action has obtained, in the shape of tuberculous invasion, owing to constitutional and extraneous causes. It is also more than probable that many glands hypertrophied from an excessive accumulation of parenchyma, independent of vascular excitement, in truly scrofulous and eventually tuberculous subjects, become implicated with tubercle in the same way; or else how is it that such hitherto permanent glandular swellings disappear very commonly by unexpected suppuration, presenting all the appearances of tuberculous destruction?

Ulcerations connected with Scrofulous and Tuberculous Glands.

It has already been observed, that when a tuberculous gland has so far progressed towards suppurative destruction that a retention of its contents becomes impossible, Nature provides an outlet for the pent-up material, by admitting an extension of the morbid process in the covering tissues. Such is recognised under the term *ulceration*; and the manner in which it proceeds has been briefly considered. The two different ways in which it obtains have also been noticed, and it now remains only to remark on the nature of such ulcerations.

When a tuberculous gland has been eaten into or opened by the process of ulceration, provided the material it contains be ready for elimination, and the abscess is thoroughly emptied, contraction gradually ensues; cicatrisation soon, under favourable circumstances, follows; and a mere scar, partaking more or less of a so-called scrofulous character, alone remains to mark the mischief that has taken place. Although very frequently Nature extends a helping hand to afford removal of the pent-up material of a destroyed gland, yet her well intentioned motives are frequently accompanied, or at least followed, by results which give rise to trouble, suffering, and deformity. In such instances are established those thick, indurated, unhealthy looking ulcerations, which are, unfortunately, of such common occurrence.

When specific indurated ulcer forms in relation with a tuberculous gland, the following processes occur. As long as a lymphatic gland continues in any way implicated with tuberculous deposit, and only partially destroyed, and its contents eliminated by means of the ulcerated exit that has formed, it is probable that a more or less patent communication will exist between the integument and the remaining gland-cavity, if contraction and healing do not take place, by reason of the cessation of all morbid action. At first, the ulcerated opening will usually appear as a more or less direct communication with the gland; the margins not presenting, perhaps, any very unusual appearance. By degrees, however, they become thickened and indurated, and rise above the surface of the integument to the height of the one-thirty-second to the one-eighth, or even the one-fourth of an inch; and proportionably increase in breadth. If of long standing, they assume a greyish, purplish, or even dark brownish colour; the tint being, I have found, much influenced by the special diathesis of the patient and the influence of extraneous causes. To the touch, they are flabby, or more or less hard. When their margins are irritated, they exude a peculiar sanious discharge, and, according to the amount of local disturbance, exhibit more or less inflammatory tendencies. Sometimes, however, instead of showing any vascular excitement, they remain livid, torpid, and cold. It may be that, during intervals of cessation of elimination from the still suppurating cavity, an effort has been made to close the ulcerated opening or openings; and that the overlapping, pale, unhealthy edges, have become united. So slight, however, is the bond of union between the flabby lips, that a free communication is soon restored for the evacuation of the enclosed material. These thickened and indurated margins very commonly are of such rapid growth that they bridge over a lazy suppurating gland, and, still increasing in size, admit within themselves ulcerating and suppurating processes. I have frequently seen this; and I believe it is a more common cause of additional trouble than is generally imagined. When several glands, a cluster, or even an entire chain, are involved in tuberculous destruction, a series of these unsightly, oftentimes painful, and troublesome indurated ulcerations of the integument, may occur. I have over and over again seen the most distressing instances; and, in one wretched object I had for a very long time under treatment, there was scarcely more than a few inches of sound skin from the chin to the second ribs, by reason of the crowding together of these painful and tedious ulcerations. I have mentioned pain as a distinguishing feature of this condition. It is oftentimes, however, slight; but occasionally it is very severe, especially at those periods when fresh disturbance is lighted up from various causes.

For months, or even years, this condition may continue; but at length morbid action ceases in the deeper seated parts, the health improves, the vital powers are renovated, and the blood regains a more normal condition. Gradually an improved state of the general system allows healthy action to take place in the diseased integument, and slowly the indurated sores disappear, and cicatrisation closes the seat of so much mischief. This is accomplished in various ways, dependent on the extent of mischief, the tone of the general system, and the treatment which has been adopted. The processes of destruction and repair are hand in hand at work. Ulceration, suppuration, absorption, granulation, etc., combined, at length lead to contraction and cicatrisation. The breach of continuity between isolated portions of healthy skin is again restored, and the patient is rid of a painful and distressing affection, although in the comparatively perfect reparation that has taken place, a lasting mark still remains. Imperfectly as the above description conveys the general characters of such ulcerations, still there are various features connected with their existence that have not been alluded to, but which will be touched upon when adverting to the treatment that is required in the different stages

of the affection. The cicatrices that result from the healing of such ulterations have specific characters. They are generally more or less furrowed, wrinkled, bridled, and puckered. They vary in size in accordance with the amount of mischief that has existed, and the way in which resolution has taken place. Sometimes they present a very peculiar appearance on one or more of the bridles; or at the bottom of a pit formed by arches of skin thrown across from one part of the cicatrix to another, often exist small buttons, or even threads of integument, surmounted with a black spot, which appears to be an abnormal secretion from an altered follicle. Closely allied in appearance are some of the slighter cicatrices after burns, especially on the face and neck. Nature having restored the damage committed by disease, seems intent on lavishing her powers of reparation to an almost unnecessary degree, and thereby giving occasion to art to undo what she has so generously performed. Before quitting the subject of ulcerations of the integument in relation with tuberculous glands, it may be well to remark that although it is not an ascertained fact, yet, in all probability, these morbid productions partake more or less intimately of the nature of tuberculous formations and destructions. Though, I believe, the microscope has not definitely settled this point, still from the analogy they present to the tuberculous ulcerations of mucous tissues, it is but fair to view them in this pathological light.

[*To be continued.*]

TEN YEARS OF OPERATIVE SURGERY IN THE PROVINCES.

By Augustin Prichard, Esq., Surgeon, Clifton, Bristol.

I.—Operations on the Face, Tongue, Palate, Neck, and Chest.

[*Continued from p.* 797.]

Tracheotomy. Case xxxiii. A. L., aged 7, had suffered severely in her throat from scarlet fever, and as the eruption was subsiding sloughing set in, and signs of suffocation came on. I was called at two in the morning to see her, and found her apparently moribund, and the surgeon who had been in charge of the case had not completed the operation of opening the windpipe. There was no time to lose, for she threw herself back as if she were dead; I therefore seized the trachea with a tenaculum through the tissues which lay upon it, for an opening in the skin had been already made before my arrival, and slit it up with a pair of scissors, when out rushed the pent-up air, allowing the heart and lungs a chance of acting once more. I enlarged the wound to introduce a piece of gum elastic catheter which I had brought in my haste, and a little blood found its way into the trachea, producing great irritation and temporary suffocation. She fell asleep in five minutes, and awoke when I introduced the silver tube that had been procured in the meantime, and then at once fell asleep again. At eight o'clock in the morning I found the tube choked with mucus, and removed it, placing a small slip of stick across the wound so as to keep it open. In this way she breathed fairly during the day, and was cheerful and able to swallow some milk, but at night I found her in a suffocating state, and with great difficulty enlarged the wound once more, and after a minute or two of great anxiety as to whether she was alive or dead, I passed in the double tube, and she fell asleep. The apparatus to generate steam, with a long tube extending to her bed, was at once put into requisition, and kept at work for the next ten days. On the fourth day, after taking out the inner tube to clean it, a piece of false membrane forming a cast of the trachea and of a tubular shape escaped, after which the breathing was more free. The tube required to be cleaned at intervals varying from three to six hours, and I was obliged to keep two pupils with her day and night. On the fifth day she ate a mutton chop, and began to take some quinine. On the eleventh day we noticed the first signs of returning voice, and a day or two before that date some air had passed through the mouth. Her breathing being quiet, the tube was allowed to remain, and it became gradually closed with thick mucus, the respiration having resumed its natural course. On the thirteenth day I removed the tube. Her respiration was easy but slow, and her appetite excellent. The wound was almost healed, and her voice quite restored on the seventeenth day, and she was soon cured; and when I last heard of her, some years after the operation, she was well, and a very minute scar remained.

Case xxxiv. B. C., aged about 25, accidently inhaled through a tube the vapour of sulphuric acid, at nine o'clock in the morning. Symptoms of choking came on at once, and increased steadily and slowly all the day until evening, when spasms, with inability to swallow, occurred. His mouth inside was charred, partly black and partly white. I operated at nine in the evening of the same day, and as the case allowed of a more deliberate proceeding than some others, I tried the forceps (armed with pointed blades) known as Thompson's instrument for performing tracheotomy; with the undesirable effect of finding that I could press back and flatten the trachea with apparently no prospect of opening it. I then opened it with the aid of a tenaculum and bistoury, and introduced the double tube, through which he at once breathed readily and freely, with a marked expression of relief in his countenance. Ice was ordered for his mouth. From the time of the introduction of the tube he had no more spasms. On the third day, he was much improved, and could swallow easily; on the fourth, the charred epithelium separated from the mucous membrane of the mouth and pharynx, leaving the surface quite clean; on the seventh day I removed the tube, and, finding he could breathe easily, drew together the wound in the trachea; and on the fourteenth, he was discharged cured.

Case xxxv. A. J., aged about 30, was suffering from chronic laryngeal disease of a syphilitic character, and the breathing was gradually becoming more difficult, until, one day, suffocation appeared imminent. I operated at eight o'clock in the evening, and experienced the greatest difficulty in inserting the tube; for besides the violent struggling of the choking patient, there was another obstacle, namely, a thick white deposit, like the contents of a steatomatous tumour, pressing in front of the larynx, and causing it to lie unusually deep. The tube was introduced through the crico-thyroid membrane as nearly as could be supposed; but the case was so urgent, that there was every fear of her dying upon the table before the operation could be completed. When the tube was fairly in the trachea, the pent-up air rushed out, having the odour of sloughy tissues, or of dead bone. Then immediately she breathed freely and easily; and all who were present were struck with the marked change in the expression of her face, from that of excessive and horrible distress to instant relief and ease; and instead of the frightful struggle that had been going on, in which the patient with death upon her side had been strenuously fighting against the efforts of the surgeon, she lay after the lapse of one minute in absolute tranquillity and repose. Were it possible to describe a scene like this with the pen, so as to give a vivid and photographic picture of what was passing, to a non-professional reader it would appear incredible and strangely exaggerated; but my experienced readers will be able to remember many a similar contest, in which they have come off victorious, and will recall the varied feelings of great anxiety, and of thankfulness and pleasure at the relief afforded by the successful issue of such an operation.

From this time she rapidly improved; and many sloughs separated, and came out of the opening from which the tube had been removed. The wound gradually closed, and she went out in the course of a month, breathing tolerably freely, but quite in opposition to the distinctly expressed advice of the surgeon under whose care she had been admitted, and in whose absence I had performed the operation just described.

Within a week after she left, she was brought back, in a moribund state, having taken cold; and before anything was done she died of suffocation.

Case xxxvi. W. A., aged 51, a fine healthy man, had suffered from diphtheria for a week before I saw him; and at that time he was breathing fairly, that is, with some oppression, but without any very obvious signs of obstruction; his symptoms becoming more marked, it was determined as a last resource to perform tracheotomy. Although a tall man, the space between the thyroid cartilage and sternum was short, and, probably in some measure in consequence of external irritants which had been freely applied, the softer tissues were unusually vascular. After opening the skin, I laid hold of the trachea with the tenaculum, and slit up two or three rings, when a few drops of blood trickled into the windpipe, and before I had fairly introduced the silver tube, so much choking came on that he fell back exhausted, and I was in great alarm lest he should be dead. Upon rapidly thrusting the tube into the wound in the trachea, and dashing cold water on his face, he breathed again,

and we helped him back into his bed, where he lay quiet, breathing tolerably freely through the tube.

This condition continued for about fourteen hours, when he died, apparently exhausted, or poisoned by the disease, but breathing freely through the tube to the last. There was no *post mortem* examination; but I believe that the diphtheritic deposit had extended through the lungs, as we have so frequently found to be the case in children who have died of this disease.

Case xxxvii. A. B., aged about 50, with old syphilitic disease of the larynx, a patient in one of the medical wards, was suffering from a constantly increasing dypsnœa; and one day, as I was going into the infirmary, I received an urgent message to go and see him. I found him seated up in his bed, blue in the face, cold, perspiring, and almost pulseless, straining energetically but almost hopelessly for air, none of which passed beyond his glottis. I sent down immediately for the instruments to perform tracheotomy, in the absence of the surgeon whose patient he was, as the case obviously admitted of no delay; but no sooner had the messenger left the ward than the patient threw up his arms over his head and fell backwards, and ceased to breathe. He was now quite pulseless, lying still, and to all appearance dead. When the instruments were brought, with the aid of one of my colleagues who had arrived in the meantime, I introduced the tube at once, but no blood flowed from the divided tissues. After blowing into the cannula and pressing upon the thorax, he made first an occasional feeble effort at inspiration, and then the efforts became more regular, gradually improving in power, until after a time, he breathed fairly, his pulse returned, and he opened his eyes; in fact, he had come to life again.

He lived on for a little more than a week, and then died apparently of some bronchial affection; and at the *post mortem* examination very little was found to account for his previous condition. The immediate cause of the sudden stoppage of his breath was probably an œdematous state of the rima glottidis, which had been relieved by the opening in the trachea, through which his respiration had been free.

Remarks. Besides these cases, I have on two occasions opened the windpipe when it was of no avail, the patients having been dead in each instance before the operation was begun. In one, an adult in the medical wards, who had suffered from great dyspnœa, I went down in the evening to operate, the case not having seemed very urgent in the earlier part of the day, and when I was going upstairs, the nurse came to say that the man was dead; and so he was, and no efforts of artificial respiration after I had placed a tube in his windpipe could elicit any sign of life: in this case there was a scirrhous tumour pressing on the larynx. I saw the other, a child, aged two years, about five hours after he had drunk some boiling water, and thinking it a severe case, I summoned a consultation. When we met, the patient appeared more distressed, but as the steaming apparatus, which I had ordered, had not been fully tried, it was determined to wait one hour, and operate if he was not distinctly relieved. As we were leaving the infirmary, we were recalled with the news that the child was dead; and I therefore hurried back, opened the trachea, and introduced a tube, and tried artificial respiration and galvanism, but to no purpose. In both these instances, the operation ought to have been performed earlier, and they might have succeeded, at any rate in prolonging the life of the first. They were, however, neither of them *apparently* more dead than the last case which I described (No. xxxvii), where the patient actually came to life, and lived for a week, after being dead for some minutes.

I have no personal experience of this operation in croup, and therefore will express no opinion upon the subject. We have of course fatal cases, but they are rare; and I believe that the establishment of a steaming apparatus, and a bed with thick curtains, in which the patients are kept by the physicians in a cloud of steam, is of the greatest service as part of the treatment of these anxious cases. I have frequently used a similar apparatus, combined with other means, in private practice, and hitherto with complete success, having never lost a case.

The operation of tracheotomy is best performed by an incision through the skin with a common scalpel, and then with a tenaculum and sharp-pointed curved bistoury; but, as I have endeavoured to show in these cases, we are frequently called to perform it in the quickest mode, and must use what instruments come first to hand. In a young child, where the rings are very flexible and the trachea very small, it is anything but an easy operation; and I have on more than one occasion seen the tube thrust at first down by the side of the windpipe. The steady use of the tenaculum, and greater deliberation in the performance of the operation, will lessen the chance of this accident.

Suicidal Wounds of the Throat. I introduce three cases of wounds of the throat, because they bear a certain amount of resemblance to some of these cases of tracheotomy; although they cannot claim to be called instances of surgical operations.

Case xxxviii. J. P., aged 60, cut his throat one evening, inflicting a severe wound with a large knife, which penetrated above the thyroid cartilage and reached completely across his neck, cutting freely into the pharynx, and, I believe, severing the pedicle of the epiglottis. He lost a large quantity of blood, which streamed from the wound and from his mouth. The wound had been stitched up by a continued suture before my arrival. He was treated with opium and stimulants. The stitches were removed on the third day, and it was found that no attempt at union had been made; the divided tissues looking much like those of a dead body. His head was bent forward, and a warm poultice applied; and under this simple treatment he gradually recovered, and went out in about a month cured of his wound, and, for the time at any rate, of his insanity.

Case xxxix. Mrs. P., aged 60, was admitted as my patient one winter's night, having just cut her throat with a dinner knife. She cut through the ala of the thyroid cartilage into the larynx. Sutures were also inserted in this case. She was quite maniacal, requiring to be strapped to the bed, as she tried to tear open the wound. The case had a most unfavourable aspect; but by careful nursing and nourishment she gradually mended, and in about four weeks the wound was healed, and she was discharged cured.

Case xl. J. S., aged 35, came in the day after the last patient. He had religious melancholy; and, in consequence of it, first tried to drown himself in a shallow brook near his house, and then he tried to cut his throat with a razor, completing the incision with a pocket-knife. He then tried to hang himself, but being discovered before he was dead, he was brought off at once to the Infirmary. He had cut through the thyroid cartilage and into the œsophagus; but besides appearing very melancholy and dull, he did not seem much the worse for his injury. He complained chiefly of the fluids he tried to swallow running out of the wound. I had the parts kept as much as possible in apposition, and granulations soon sprung up; and in less than four weeks this formidable wound had almost healed, leaving for a time a fistulous opening through which his tea trickled, but he gravely informed me that when he drank beer none came through. In the fifth week I passed a probe into this fistula, and it went readily backwards and upwards into his pharynx until four inches of the probe had entered. In a short time afterwards, he was discharged cured.

Remarks. The great majority of our cases of suicidal wounds of the throat have terminated successfully, and there has been a considerable number during the past ten years. I do not believe that union by the first intention ever takes place if more than the integuments has been cut through; and therefore the use of sutures, much as I recommend them in almost every other available case, seems to answer no useful end here. Attention to the apposition of the edges of the wound by fixing the patient's head, and careful diet, with the use of brandy and opium, are the most important items in the treatment.

Paracentesis Thoracis. I have performed this operation three or four times, at the request of the physicians, for the relief of the chest in cases of empyema; all of them owed their origin to tubercular disease and were ultimately fatal. With the exception of the operation itself, their treatment was entirely medical; and particular notes of the progress of these cases would be out of place here. The operation is best performed by a lancet and trochar, using a gum elastic catheter to draw off the pus, and bending down its extremity until the open mouth is beneath the surface of the fluid which first flowed out. This simple precaution renders it quite impossible that air should pass into the chest through the tube, and is far better than any of the complex machines that have lately been elaborated to answer this end.

[*To be continued.*]

LETTERS AND COMMUNICATIONS.

Letters or communications for the Journal should be addressed to Dr. Wynter, Coleherne Court, Old Brompton, S.W.

Letters regarding the business department of the Journal, and corrected proofs, should be sent to 37, Great Queen Street, Lincoln's Inn Fields, W.C.

British Medical Journal.

SATURDAY, OCTOBER 20th, 1860.

CRANLEY VILLAGE HOSPITAL.

In these days, in which it but too often happens that medical charities are maintained chiefly for the advantage of the non-medical staff, it is quite refreshing to find a hospital with this significant rule:—

"The establishment shall consist of a regular nurse, and another woman for the necessary work of the house. A lady has also kindly promised the benefit of her assistance in all special cases."

There is a simplicity in the nature of this staff which almost reminds us of a pastoral state of life, were it not that we find the gratuitous and benevolent "lady" element in it, which is due to a highly civilised condition of society. But where, asks the reader, is this marvellous hospital to be found, which can by no possibility afford any attraction to managing gentlemen of Mr. Anderson's class, and which works with a couple of servants, one of whom is occasionally lent out to hire? We have not to go far to find this establishment—no farther, indeed, than Cranley, in Surrey, which has had the honour of establishing the original village hospital, the first Report of which now lies before us. Some time last year, it will be remembered, we drew attention to this scheme, which had been set on foot by Mr. Albert Napper, our associate; and it gives us great pleasure to find that for one year the scheme has been tested, and found to answer most admirably. It has hitherto been the practice to send all severe surgical or medical cases that occur in small towns and villages to the county hospitals, or those of the large towns in the neighbourhood; but it struck our associate that very many of them could be treated much nearer home, with manifest advantage both to patient and medical practitioner. In the first place, it cannot be denied that the removal of patients suffering from severe surgical injuries to long distances must be exceedingly detrimental, not only on account of the delay and the difficulty of carriage, but for the reason that town air is by no means favourable to the cases of country patients. This system of draining all the instructive cases from country districts is also detrimental to the practitioner, inasmuch as it deprives him of the means of exercising and maintaining his manipulative skill. There are, doubtless, many practitioners who have never had an opportunity of assisting or of witnessing a first-rate operation since their student days, in consequence of the lack of some institution in which they could be performed with due care and safety. This in itself is a great grievance, inasmuch as the practice of the art in its highest and most critical, as well as in ordinary cases, is a real delight; it is a grievance, moreover, in a pecuniary point of view, inasmuch as it necessarily inculcates the notion that where there is a want of practice, there must be a want of skill; hence the higher classes are led to call in the aid of metropolitan celebrities on very slight occasions. Knowing as we do the fertility of resource that characterises the country general practitioner, and his general ability in the treatment of disease, we look upon this drawback to his career as an exceedingly annoying one, and we hail with pleasure any means by which it can be obviated. We think Mr. Napper has found out the means; and in the multiplication of village hospitals we think we see a vista opening which will lead to the benefit of the great mass of the country practitioners residing in remote districts.

The blessings of civilisation are slowly spreading from great cities to insignificant towns in all directions; we see free libraries opening in obscure hamlets, and all the luxuries of life gradually penetrating to the remotest recesses of the island, and fast becoming necessaries of existence—is it not strange that the beneficent appliances of hospitals should have remained up to the present time the monopoly of large cities and country towns? No doubt the expense of bringing home good surgical aid to the labourer's door has been the main impediment in the way of establishing local curative establishments; but the expense, as we now see, entirely depends upon the view taken of the nature of the hospitals necessary. Mr. Napper is satisfied with a staff of two old women, and consequently the cost of the Cranley Village Hospital is small. The whole cost of the establishment for the year ending October 1860, has only been £156: 10: 8, out of which £92: 3: 4 went as a first expense in furnishing and improving the Hospital; so that the actual cost of the 23 cases received and treated was only £64: 7: 4, or less than £3 per case. In order that our readers may see the gravity of some of these cases, we think it as well to quote the following from the Report.

J. S.—Deep and extensive ulceration of the leg, with sinuses extending from ankle to ankle.
J. F.—Compound fracture of both bones of the leg.
J. T.—Extensive and deep nævus of the gum of the upper jaw.
J. G.—Necrosis of the large bone of the leg.
M. M.—Chronic pneumonia of both lungs, accompanied with dropsical affection of the chest with tympanitis.
E. V.—Hare-lip, which rendered her a hideous object.
M. A.—Fracture of both bones of the right arm.
E. W.—Extensive cicatrix from a burn.

It is clear that the great majority of these cases could not have been well treated at their own homes. It may be asked, however, Would not many of them, in the ordinary course, have gone into the workhouse, and been treated by the union surgeon? We answer, No; and for this reason; that to a certain extent the hospital is self-supporting—the patients being received "on the payment of a weekly sum, the amount of which, dependent on their circumstances, is fixed by the employer in conjunction with the manager of the hospital" (the clergyman of the parish). It is clear, then, the patients are not paupers, although they are close upon that category, and would fall into it were it not for the aid offered by this hospital. The major portion of the receipts are of course obtained by donations and subscriptions from the wealthy in the neighbourhood; but the principle of self-aid, no matter how small, is established by the system of weekly payments; and we are delighted to find that a remote village in Surrey has set the example in a matter which must sooner or later be followed by

our great metropolitan hospitals. When we see poor agricultural labourers thus contributing towards the expenses of their maintenance and care, how can we feel anything but disgust for a system which fills St. George's and other west end hospitals with plethoric butlers and dainty lady's maids, whose salaries are amply sufficient to provide all their medical wants outside of the hospital? It is not the first time that the country has taught the town "how to do it"; and we wish Mr. Napper every success in the interesting and important experiment he is now engaged in.

The thanks of the profession are also due to the vicar of the parish, the Rev. J. H. Sapte, who has worked hand in hand with our associate, and has shewn an excellent example to others of his cloth, who take upon themselves to cure bodies as well as souls by the practice of homœopathy. If the Bishop of Exeter is still brooding over his notion of a medical diaconate, we beg to recommend his attention to the doings of the rector of Cranley, who could probably show him that the clergy can aid in medical ministrations to the poor in other ways than by transforming themselves into hybrids, incapable of performing either spiritual or medical duties satisfactorily. Our parting word to Mr. Napper is to keep to his two old women. As long as his staff is comprised in these inexpensive individuals, he will be enabled to steer clear of the rock upon which most young institutions of a like nature are but too apt to split—ruinous expense.

A JANUS AMONG SKIN-DOCTORS.

In the last number of the Journal, we reviewed a work on "Skin-Diseases and their Remedies; by Robert J. Jordan, M.D." In performing this duty, we criticised the book simply on its own merits; and regarded it as being to all appearance the production of a young man anxious to ingratiate himself into the practice of a speciality by a parade of his book-learning. Since the appearance of the review, we have noticed, and several correspondents have pointed out to us, a fact in relation to the author of the book which, had we been cognisant of it, would have entirely removed every particle of fear that we might be dealing too harshly with him. The fact is this: that Dr. Jordan touts for practice in the most unblushingly disgraceful manner in the public newspapers, provincial as well as metropolitan. Here is his advertisement:—

"Just published, price 1*s*., post free for fourteen stamps, with photographic illustrations, 'Diseases of the Skin'; by Robert J. Jordan, M.D., Licentiate of the Royal College of Physicians, Edinburgh; Member of the Royal College of Surgeons, England, etc., etc.; author of 'Skin-Diseases and their Remedies', etc. Containing the modern treatment (as adopted at the Hospital St. Louis, Paris) for the cure of those diseases so prevalent in a high state of civilisation, consequent on an impure state of the blood, causing cutaneous eruptions, scorbutic affections, and scrofula; treatment of superficial and deep seated ulcers; torpidity of the circulatory system, causing discolouration of the hands, redness, roughness of the skin, disfiguring the face, giving an unsightly appearance, in lieu of a clear, fair, and healthy complexion.

"'This book is, as he has aimed to make it, "thoroughly useful and practical."'—*Med. Times and Gazette*, Aug. 4, 1860.

"Published by John Churchill, New Burlington Street. To be had direct from the Author only, 20, George Street, Hanover Square, London. Hours for Consultation from 10 to 2; and by appointment."

The inference is clear enough: Dr. Jordan is the *Janus bifrons* of skin-doctors. He has a face for the profession, and another for the people. Leaving no stone unturned to catch a few stray patients, he publishes two works on the same subject; one addressed to the profession, the other to the public. The latter, though brought out at the lower price, is rendered more attractive by "photographic illustrations", and is advertised in such a way as to entitle the author to take rank with men of a very different standing from those whose names we mentioned last week at the conclusion of the review. The name of Mr. Churchill is indeed appended; but we are sure that this most respectable publisher cannot, when he allowed his name to appear, have been aware of the company into which it was to be thrust.

As to the laudatory extract from the *Medical Times and Gazette* of August 4th, it was not written concerning the book which is advertised in the papers as containing photographic illustrations, and published at one shilling, but concerning an unillustrated work which is sold for half-a-crown—the book, in fact, which we reviewed last week. Dr. Jordan, in thus endeavouring to make it appear that our contemporary has praised his shilling book, has shewn that he can stoop to other, and perhaps more disgraceful, means of gaining the public ear than those to which we referred last week.

With these remarks, we will leave the professional character of Dr. Jordan (of whose degree as M.D. we have not been able to find the source), as exhibited in his advertisement, to the appreciation of our associates, and of all respectable members of the profession.

THE STUDY OF OPERATIVE SURGERY IN THE LIVING BODY.

Professor Spooner, of the Royal Veterinary College, recently stated to his class that among our continental neighbours, in the Veterinary School at Alfort, *live* horses are used for the purpose of demonstrating the operations of surgery. This statement has been confirmed by Dr. D. Fraser, who has recently visited that institution, and who learned from the assistants that,

"In addition to practising vivisection for the sake of physiological research or experiment, every operation which could by possibility be required to be performed in veterinary practice was, on two days a week during the session, performed on living (diseased or worn-out) horses; operations of the most exquisitely painful nature being performed on different parts of the same animal, until nature gave way."

Anæsthetics, it appears, are not administered.

No good surgeon or physiologist can find room for a mawkish sensibility: it is necessary, it is therefore justifiable, sometimes to take the lives of or to inflict pain on lower animals, when the object sought is one of importance to science and to mankind, and cannot well be gained in any other way. But the practice of the veterinarians of Alfort is most unnecessarily cruel—Mr. Spooner very appropriately calls it "fiendish". Our surgeons gain their instruction in operative details on the dead human body—to how good purpose, is patent to the whole world: and surely veterinarians, with far inferior responsibilities, cannot require to torture live animals to learn that which the dead might equally well teach them.

Association Intelligence.

SOUTH-EASTERN BRANCH:

ROCHESTER, MAIDSTONE, GRAVESEND, AND DARTFORD DISTRICT MEETINGS.

THE second meeting for the present session will be held at the Star Inn, Maidstone, on Friday, October 26th, at 2.45 P.M.

Dinner (punctually at 5 P.M.) will be prepared for those who may be able to remain.

Trains will leave Maidstone for Rochester and all stations on the North Kent line, at 7.25 and 8.20.

Gentlemen intending to dine, are requested to give an intimation thereof on or before Wednesday, October 24th, to Mr. Fry, of Maidstone, or to

JAMES DULVEY, *Honorary Secretary.*

Brompton, Chatham, October 1860.

BATH AND BRISTOL BRANCH: GENERAL MEETING.

A GENERAL meeting of this Branch was held at the White Lion, Broad Street, Bristol, on September 27th, 1860, at seven o'clock; JOHN SODEN, Esq. (Bath), President, in the Chair. There were also present: W. Budd, M.D. (Clifton); G. Burder, M.D. (Bath); W. J. Church, Esq. (Bath); W. M. Clarke, Esq. (Clifton); C. Coates, M.D. (Bath); C. Collins, Esq. (Chew Magna); G. G. Corbould, Esq. (Bristol); E. Crossman, Esq. (Hambrook); R. S. Fowler, Esq. (Bath); E. L. Fox, M.D. (Bristol); J. Godfrey, Esq. (Bristol); J. M. Granville, Esq. (Bristol); T. Green, Esq. (Bristol); W. Henderson, M.D. (Clifton); W. B. Herapath, M.D. (Bristol); W. R. Hill, M.D. (Bath); J. Hinton, Esq. (Charterhouse Hinton); F. P. Lansdown, Esq. (Bristol); C. Leonard, Esq. (Bristol); J. P. McDonald, M.R.C.P. (Bristol); H. Marshall, M.D. (Clifton); E. S. Mayor, Esq. (Bristol); J. S. Metford, Esq. (Clifton); G. Norman, Esq. (Bath); G. S. Ogilvie, Esq. (Bedminster); H. Ormerod, Esq. (Bristol); J. Parsons, Esq. (Beckington); J. St. G. Parsons, M.R.C.P. (Bristol); A. Prichard, Esq. (Clifton); W. Y. Sheppard, Esq. (Bristol); J. K. Spender, Esq. (Bath); R. U. Stone, Esq. (Bath); J. G. Swayne, M.D. (Clifton); S. H. Swayne, Esq. (Bristol); and James Taylor, Esq. (Bristol),—members; and T. O. Mayor, — Bromhead, and — Coombes, Esqs., visitors.

Papers. The following papers were read:—

1. Delirium Tremens. By E. L. Fox, M.D.
2. Alcoholic Treatment of Wounds. By A. Prichard, Esq.
3. Tubercular Meningitis. By W. R. Hill, M.D.

SOUTH MIDLAND BRANCH: GENERAL MEETING.

THE Autumnal Meeting was held at Newport Pagnell on Friday the 12th inst. The members of the Association and visitors assembled at the residence of E. Daniell, Esq., where they sat down to an excellent and elegant luncheon. After enjoying the hospitality of the generous host, the company adjourned to the British School Room, which had been engaged for the meeting; but subsequently accepted the invitation of H. Hailey, Esq., who kindly offered the use of a comfortable room at his residence.

There were present:—T. HERBERT BARKER, M.D., President, in the Chair; J. M. Bryan, M.D. (Northampton); E. Daniell, Esq. (Newport Pagnell); W. C. Daniell, Esq. (Stony Stratford); J. Denne, Esq. (Winslow); G. H. Grindon, Esq. (Olney); H. Hailey, Esq. (Newport Pagnell); T. N. Heygate, Esq. (Hanslope); R. C. Hurst, Esq. (Bedford); A. D. Mackay, M.B. (Stony Stratford); H. Terry, Esq. (Northampton); H. Veasey, Esq. (Woburn); R. W. Watkins, Esq. (Towcester); C. Whitton, M.D. (Stony Stratford); J. F. Williams, Esq. (Cranfield); J. Williamson, Esq. (Wooton); and as visitors, A. Barker, Esq. (Bedford); A. Henry, M.D. (London); W. Heygate, M.D. (Newport Pagnell); — Heygate, Esq. (Hanslope); G. O. Rogers, Esq. (Newport Pagnell); and J. L. W. Thudichum, M.D. (London).

Dr. Barker having taken the Chair, the minutes of the last meeting at Bedford, in June last, were read by Dr. Bryan, one of the Honorary Secretaries.

Introductory Remarks by the President. The PRESIDENT delivered the following remarks:—It is not usual for the President to deliver a formal address at the Autumnal Meeting of the Branch; and I shall not deviate from this custom further than by making an observation or two upon our success.

It is four years ago this week since we held our first meeting in Northampton. At that time, there were thirty-six members of the British Medical Association residing in what we have designated the South Midland District. To-day we number ninety-two members; so that, within the short period of four years, fifty-six new members have been brought into the Association. Such uninterrupted success is, I assure you, a source of unmitigated pleasure to us who took the initiative in calling the first meeting, and to every one who assisted in establishing the Branch. While, however, we may congratulate ourselves on the amount of success we have already attained, we must not forget that much yet remains to be done; that there is much new ground to be broken up; that there are yet many members of the profession in our own district who do not themselves participate in, or confer upon others, the benefits of which our noble Association is capable. The advantages of membership are mutual; for at the same time that every new member may add his store of experience to, and thus enhance the value of, our discussions, he will also derive some benefit from intercourse with his professional brethren. And what are the advantages of membership? It is surely no trifling advantage that we should occasionally meet together for professional advancement and discussion—for the purpose of assisting each other in grappling with the infinitely varied forms of disease, of receiving from each other hints for the amelioration of human suffering—and of assisting in the progress of rational and scientific medicine. It is surely, too, no small matter that occasionally we should meet as friends at the festive board, and rub off those asperities which have been wont to be, alas! too characteristic of our profession. I trust that a better—a brighter—day has dawned, when every member of our profession shall be animated by *un amour propre*, when one spirit shall pervade the entire brotherhood—none other than a veritable, genuine *esprit du corps;* when every member of our profession shall as jealously guard the honour and well being of every brother member, as he would guard the apple of his own eye; and when all shall combine to promote the honour of his noble calling. I cannot conceive any plan better adapted to effect these two grand objects of professional advancement and of mutual good will and brotherly love, than these Branch meetings. When to these we add the fact that we have a first class weekly JOURNAL brought home to our very doors, conveying to us a weekly epitome of the progress of medical science at home and abroad, it is evident that the members of our Association enjoy a vast amount of advantage, and occupy a very high "stand-point" from which to make their survey of all matters pertaining to their profession. It is obviously, then, our duty to do all we can to extend these benefits, and to bring in those who so far have not been with us. Let us not rest, therefore, until our Branch shall embrace within its fold and brotherhood every honourable member of the profession in the entire district.

Our friend Mr. Daniell, who has worthily filled this presidential chair, greets us this day with a hearty welcome to Newport Pagnell. The natural goodness alone of his generous heart would give this welcome to any professional brother at any time; but there is one special reason why he will rejoice at our meeting here to-day, and why we may also congratulate ourselves on meeting in this place. It has been arranged to propose a Committee to frame the rules for a Medical Provident Society in the south midland counties; and I need not tell you that this is a subject which is very dear to our friend Mr. Daniell. For many years he worked incessantly, and spent much of money as well as of time, in order to establish a self-supporting institution, which should render its members independent of precarious charity. The time had not then arrived. There was too much apathy, and our friend's labours were apparently in vain. Not so, however, in reality. His labours were not all thrown away. The seed was sown; and if now after many days it shall appear to have taken root, and to be likely to bring forth fruit, none will rejoice more heartily than he. No! not even the widows and the orphans whose cause he has so often and so eloquently advocated. I will not anticipate what will be said on this subject, more than that I have been looking through the rules and reports of the medical provident societies already in existence, and that they have been eminently successful and useful. It is desirable to follow their example, and establish a society for the south midland counties, the funds of which shall provide for its members (1) a certain amount of money during sickness, or in the event of being permanently disabled; (2)

an annuity for their widows; and (3) an annuity for each orphan child under a certain age. We shall have the experience of old and existing institutions to guide us; and, in our flourishing Branch, we have an excellent basis of operations. May God grant us success! If there be one earthly object upon the pursuit of which we may invoke His blessing, surely that object is to provide for the widow and orphan, and to soothe the pillow of the dying man by whispering into his ear that they shall be provided for.

Letters. The President concluded by stating that notes expressive of regret at their unavoidable absence, had been received from Mr. Ceely, Mr. Dulley, Mr. Farr, Mr. Gatty, Mr. Hemming, Mr. Leete, Mr. Mash, Dr. Ody, Dr. A. Robertson, F.R.S., Mr. Terry, jun., and Mr. Woakes, jun.

Committee. The Chairman said that there were two vacancies in the Managing Committee to be filled up, in consequence of Dr. Bryan and Mr. R. C. Hurst having been elected at the last meeting as Honorary Secretaries.

Mr. Daniell proposed, and Mr. Grindon seconded—

"That Mr. Ceely of Aylesbury, and Dr. Faircloth of Northampton, be elected to fill these places in the Committee."

The motion was carried unanimously.

New Members. The following gentlemen were unanimously elected members of the Branch and Association, on the motion of Mr. Terry, seconded by Mr. Veasey:—Mr. Hawkins (Woburn); Dr. A. D. Mackay (Stony Stratford); Mr. G. Olive (Northampton); and Mr. W. H. Walker (Bugbrooke).

Papers and Cases. The following papers, etc., were read:—

1. A Case of Rupture of the Sigmoid Flexure of the Colon. By Hammett Hailey, Esq.
2. A Case of Traumatic Tetanus cured by Chloroform. By H. Hailey, Esq.
3. A Case of Presentation of Both Hands. By R. C. Hurst, Esq.
4. Severe Urticaria produced by some of the Setaceous Larvæ. By the President.
5. On Subclavian Murmur. By B. W. Richardson, M.D.
6. On Renal Calculus. By J. L. W. Thudichum, M.D.

The following communications, notice of which had been given, were postponed till the next meeting:—

1. Case of Sloughing of the Entire Scrotum, and Complete Exposure of the Testes, followed by Restoration of the Integuments. By J. M. Bryan, M.D.
2. On Accidental Causes of Scurvy. By D. J. Francis, M.D.
3. A Case of long continued Jaundice, with subsequent ejection of Gall-Stones from the Stomach and Bowels. By J. Faircloth, M.D.
4. On Strictures and Obstruction of the Alimentary Canal. By H. Veasey, Esq.
5. On Placenta Prævia. By J. F. Williams, Esq.
6. A Case of Traumatic Tetanus: Recovery. By E. Woakes, jun., Esq.

Dr. Faircloth, Dr. Francis, and Mr. Woakes—who had promised papers—were prevented from attending by pressing professional engagements.

Mr. Daniell moved, and Mr. Terry seconded—

"That the thanks of the meeting be given to the authors of the several papers; and that they be requested to forward them for publication in the British Medical Journal."

Medical Provident Society. Mr. Daniell made a few appropriate remarks on the importance of establishing a Medical Provident Society, and concluded by proposing a Committee for the purpose of drawing up the rules and regulations; such Committee to consist of the present Managing Committee of the Branch, with the addition of the following gentlemen:—Mr. Dulley, Drs. Hacon and Lawford, Mr. Leete, Dr. Paley, and Messrs. Terry and Veasey. Mr. Daniell's name was also added to the list.

Mr. J. F. Williams seconded the resolution, which was carried unanimously.

The thanks of the meeting were voted to Mr. Hailey for his kindness in inviting the members to his residence.

Upon the table were exhibited specimens of renal calculi; some beautiful drawings of casts of the bile-ducts from hepatic calculi; a cast of extroverted bladder; and three varieties of efficient pessaries.

Dinner. A number of the members and visitors dined together at the Anchor Hotel, at half-past five, P.M.: Dr. Barker officiating as Chairman; and E. Daniell, Esq., in the absence of the President-Elect, Dr. Francis, as Vice-Chairman. The following toasts were proposed: "The Queen;" "The Prince Consort, the Prince of Wales, etc.;" "The Bishop and Clergy of the Diocese;" "The Army and Navy," responded to by Mr. Terry; "Success to the South Midland Branch of the British Medical Association," by the Chairman; "The President," proposed by Mr. W. C. Daniell; "The President-Elect," by the Vice-Chairman; "The Secretaries," proposed by Dr. Henry, and responded to by Dr. Bryan and Mr. R. C. Hurst; "Success to the South-Midland Medical Provident Society," proposed by Mr. Denne, and responded to by Mr. Daniell; "The Sister Branches and the Visitors," proposed by Mr. Veasey, and responded to by Dr. Thudichum; "The Health of Dr. A. Robertson," by the Vice-Chairman; "The Ladies."

The next meeting will be held in Northampton, in May next, under the presidency of Dr. Francis of that town.

Reports of Societies.

MEDICAL SOCIETY OF LONDON.

Monday, October 15th, 1860.

A. B. Garrod, M.D., F.R.S., President, in the Chair.

THE PHYSIOLOGICAL AND THERAPEUTIC PROPERTIES OF PEROXIDE OF HYDROGEN. BY B. W. RICHARDSON, M.A., M.D.

The subject of the paper was considered by Dr. Richardson under the following heads:—

1. History of the Subject.
2. Preparation of the Peroxide of Hydrogen.
3. Physical and Chemical Characters.
4. Relations of Peroxide of Hydrogen to Ozone.
5. Physiological Properties.
6. Therapeutic Value.

The last of these, the author proposed merely to glance at on the present occasion, reserving its fuller discussion for another paper.

1. *History.* Peroxide of hydrogen was discovered in 1818 by Thénard, who gave it the name of deutoxide of hydrogen, and described it most minutely in his *Traité de Chimie.* Little if any addition has been made to Thénard's description by Pelouze, Mitscherlich, Vogel, Berzelius, and other chemists who had also investigated the subject; and, as chloroform formerly was, it seems to have been regarded as a chemical curiosity. Of late, the speculations of Schönbein on ozone have caused the peroxide of hydrogen to be discussed more than formerly; but without any idea of applying the substance to practical purposes, until the present line of inquiry was entered on.

2. *Preparation.* Peroxide of hydrogen is formed whenever the peroxide of potassium, of sodium, of barium, of strontium, or of calcium, is digested with an hydrated acid capable of forming a salt with the base arising from the decomposition of the peroxide. Peroxide of barium has been found to be most available for the purpose; it may best be prepared by passing a current of dry and pure oxygen over pure anhydrous baryta heated to redness in a glass or porcelain tube. The baryta must be free from foreign matter, especially manganese; and the oxygen must be entirely freed of carbonic acid. If either of these impurities be present, the result is a rapid evolution, and loss of the oxygen. The proofs of the purity of the peroxide of barium are the following:—*a.* It presents a greyish white colour, free from green specks; *b.* When powdered and slaked with water, it forms a paste without any evolution of heat; *c.* It is entirely soluble in dilute hydrochloric acid. In preparing the peroxide of hydrogen, two fluiddrachms and twenty minims of pure hydrochloric acid are added to twenty fluidounces of distilled water. Two drachms and ten grains of peroxide of barium are then powdered, placed in a porcelain or glass basin, and made into a soft paste with a little water. The paste is then gently added to the acid solution by a glass or boxwood knife (iron must not be used), stirring until all is dissolved; if there be any precipitate, it must be taken up by a minim or two of hydrochloric acid. By this process, soluble chloride of barium is formed, and the water is charged with the oxygen set free from the peroxide of barium. The barium is next removed by the cautious addition of dilute sulphuric acid, which precipitates the sulphate of baryta. After this precipitate is all deposited, the clear solution, containing peroxide of hydrogen and free hydrochloric acid, must be poured off and filtered. With this solution, the process already described, of adding peroxide of barium, hydrochloric acid, and sulphuric

acid, is repeated, until it is charged with the required amount of oxygen; and by care and time, water may thus be saturated with thirty times its own volume of oxygen, but, for therapeutical purposes, Dr. Richardson believed that ten volumes were likely to be sufficient. The free hydrochloric acid may be removed by adding sulphate of silver, and afterwards baryta; but, for medical purposes, it is unnecessary to remove the hydrochloric acid, as it is in very small quantity, and does not interfere with the physiological action of the oxygen. Dr. Richardson had tried other processes for obtaining peroxide of hydrogen, such as that recommended by Pelouze, of using hydrofluoric acid; but he had been led to the conclusion that Thénard's original process is the best.

3. *Physical and Chemical Properties.* The solution of peroxide of hydrogen in water is colourless: but it evolves an odour resembling that of a weak solution of chlorine, and becoming more obvious when a little is placed in the hand. It has, even when very dilute, a caustic taste. In the concentrated form, it whitens the mucous membrane, and imparts a tingling sensation. At its highest concentration, it has a specific gravity of 1·452, and does not freeze at 30°. Peroxide of hydrogen mixes with water in all proportions: and may be kept in solution at all ordinary temperatures. Light has, as far as is known, no influence on it; but heat evolves the oxygen. When it is briskly boiled, the oxygen does not go off until the boiling point is reached; then the oxygen goes off with effervescence, continuing to do so even after the water has again become cold, until it is all disengaged. The peroxide of hydrogen is decomposed by the voltaic current. The effects of bringing the peroxide of hydrogen into contact with inorganic bodies are various; some, as arsenic (arsenious acid) and sulphurous acid are oxidised, forming arsenic and sulphuric acid; others, as carbonic acid, oxide of manganese, silver, mercury, and charcoal, set the oxygen free. The oxides of gold, silver, mercury, and platinum, expel the oxygen with violence, and also lose a portion of their own oxygen. Some metals, as iron and antimony, exert no action in their simple state. Among animal materials, defibrinised blood absorbs the oxygen with heat; washed fibrine, and cellular tissue, evolve the oxygen pure; albumen, urea, gelatine, fibrous membrane, and skin, produce no change. When the peroxide is brought into contact with grape-sugar, carbonic acid is evolved; and the sugar is resolved into secondary compounds. The effect on putrid materials requires further investigation; but, although fresh fibrine evolves oxygen without undergoing change, the decomposition of putrefying fibrine is hastened: the same is the fact with regard to albumen. In all cases where oxygen is liberated, heat is evolved. When one of Moffat's ozone papers, consisting of paper saturated with iodide of potassium and starch, is dipped in the peroxide of hydrogen, the blue iodide of starch is formed: this, however, is prevented by ammonia, by tobacco-smoke, by hydrocyanic acid, by aqueous solutions of aconite or of opium—in fact, by the whole series of narcotics. The permanency of the neutralisation depends on the physical character of the neutralising agent: if it be volatile, as ammonia, the effect is transient. These facts, Dr. Richardson observed, showed that narcotics act, not by producing any active change, but by arresting the oxidation of the tissues.

4. *Relation of Peroxide of Hydrogen to Ozone.* The oxygen as it exists in the peroxide of hydrogen is in a more active state than as it exists in common air; for the oxidation of the starch paper is not produced by common air nor by water charged to excess with ordinary oxygen. The resemblance of the effects of the oxygen in the peroxide of hydrogen to those produced by ozone is certainly very striking; the only physical difference appearing to be that the ozone produced in common air is not capable of dilution in water. The question as to the real relation of the two still remains under discussion.

5. *Physiological Properties.* When peroxide of hydrogen is added to venous blood, this at once assumes the light arterial hue. In consequence of the presence of fibrine, the gas soon begins to be evolved; but the evolution is not perfect under a temperature below 100° Fahr. At the ordinary temperature, the oxygen is not entirely liberated until carbonic acid or oxide of manganese is added, when the blood again becomes venous. When ammonia is mixed with venous blood, the peroxide of hydrogen produces no change until the alkali is displaced. Dr. Richardson had made some experiments to ascertain whether the peroxide of hydrogen would support life. Having boiled some distilled water for three hours, and cooled it to the ordinary temperature, he placed some in a tube, and introduced a fish, closing the free end of the tube. The animal died in fifty-five minutes. Another portion of water, treated in the same way, was charged with half its volume of peroxide. A fish was immersed; the water immediately began to give off bubbles of oxygen gas. The animal died in an hour and fifteen minutes; its body was almost entirely whitened. Another fish, placed in a tube containing common water, was unaffected at the end of two hours. In another experiment, Dr. Richardson asphyxiated a rabbit with carbonic acid, and injected slowly, through an opening in the windpipe, some water containing three times its volume of peroxide of hydrogen. In ten minutes, on opening the chest, the right side of the heart was found to be distended with dark blood; the left auricle and ventricle were charged with red blood, and were contracting vigorously. The lungs were white, and fluid charged with bubbles of oxygen exuded from them. On pouring some of the solution over the right auricle, the blood became red, but the action of the auricle was suspended. No effect was produced by pouring some over the intestines. When some of the solution was injected through the aorta, a bright red current was returned by the vena cava, and the muscles of the neck and thorax, and the diaphragm, regained their irritability, which had been apparently lost. It died away as the fluid returning by the cava became thin and discoloured. Dr. Richardson injected some peroxide of hydrogen into the lungs of another rabbit killed by carbonic acid; artificial respiration by means of bellows being set up at the same time. As soon as the fluid entered the respiratory tract, the lungs could not be inflated by the bellows. On opening the chest, it was found that the fluid had partly exuded into the lung-tissue. An additional quantity being now injected, some found its way into the left auricle, whereon the left auricle and ventricle commenced to contract. The right auricle was loaded with dark blood, and was contracting; on pouring some of the solution on it, the blood in it become of a brilliant red colour, but the contractile action ceased. The lungs were entirely blanched. In another experiment, Dr. Richardson killed a young cat with chloroform, and injected the lower extremities, through the aorta, with peroxide of hydrogen. Cadaveric rigidity was not manifested in them, while it was complete in the upper limbs within six hours. The rigidity was not removed by injection of the peroxide. The peroxide of hydrogen has also the property of preventing the tetanic rigidity producible by ammonia. The peroxide of hydrogen, diluted with not above five volumes of water, may be taken by the mouth with safety up to at least six drachms. In a full dose, it produces an exhilarating effect and general warmth of the body; there is no pain, nor distension. When the solution of peroxide of hydrogen is added to decomposing organic substances, it produces rapid destruction by combining with the oxidisable matters. This process is prevented materially by ammonia.

6. *Therapeutic Properties.* Peroxide of hydrogen, as has been already seen, quickens oxidation and arterialises blood; it hastens the decomposition of decomposing animal tissues; when combined with blood, it restores the power of muscles to contract, but at the same time calms over-excitability. It is then rational to try its effects freely in a large number of diseases. In extreme cases of poisoning by the alkaloids, the solution might be introduced into the blood by transfusion. In tetanus, the peroxide affords a reasonable chance; for muscular rigidity is impossible in the presence of free oxygen in the muscle. In typhus, also, in which death occurs in consequence of the air in the pulmonic tract not taking up oxygen, it may be expected to be of service; and it may be tried with great promise, both internally and externally, in cancer. Most relief is promised, however, in diabetes; for all evidence points to the fact that this disease depends on a deficient oxidation of organic material. Dr. Richardson had had under his care a woman aged 42, who had been suffering from diabetes for two years and a half. When he saw her, she ordinarily passed sixteen pints of strongly saccharine urine in twenty-four hours. She was treated for three weeks with tincture of sesquichloride of iron, and opiates at night; but without effect. A solution charged with three volumes of oxygen was then given in doses of two drachms, soon increased to half an ounce. In four days, the urine was reduced to eight pints; and on the eighth day, she reported that she had passed a whole night in sleep. The specific gravity of the urine had fallen to 1020. The medicine being omitted for a day, the symptoms began to recur. After she had again taken it for fourteen days, the urine became decreased to three pints; and the patient, considering herself well, ceased to attend. A few days ago, she suddenly died of hemiplegia, to partial and transient attacks of which she had been subject for some years. The day before her death, she had passed three pints of urine.

In the administration of peroxide of hydrogen, the volume of oxygen contained should be noted. As a medicine, it is tasteless; it should always be given in distilled water, and may be diluted to any extent. It may be combined with the mineral acids, and with sesquichloride of iron; it is incompatible with the alkalies, and with all carbonates.

Dr. Richardson concluded by disclaiming all exaggerated suggestions as to the value of this new medicinal agent, and observed that he did not bind himself inviolably to any opinions which he had uttered, as they might require correction by new observations. He believed, however, that the peroxide of hydrogen is a powerful medicine, the full value of which may require years for its development, and the useful application of which may be developed even in different directions from those suggested.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, October 3rd, 1860.

Edward Rigby, M.D., President, in the Chair.

Eighty-four new Fellows were elected by ballot in the usual manner.

Case of Serous Apoplexy Terminating Fatally in Thirty-five Hours on the Sixth Day of Lying-in. By R. Uvedale West, M.D. The patient, aged 38, was delivered on June 4th, 1860. She was of full habit, with a remarkably dingy, freckly complexion, suggesting the idea of imperfect elimination of urea. Her last confinement, the fifth, took place in June 1859, when she had violent *post partum* hæmorrhage, with subsequent febrile symptoms and phlegmasia dolens. Her state of health since that period had not been good. The labour which preceded her death was easy and quick, but the placenta was incarcerated, and had to be removed. For a day or two there was much hæmorrhage, but she was otherwise pretty well until the fifth day, when, soon after breakfast, without previous complaint, she was suddenly seized with a kind of fit. When seen by Dr. West, soon after this attack, she was found semi-comatose and speechless; she had hemiplegia of the right side; the arm on this side was rigid and semi-flexed; the pupils were of medium size, equal; there were no convulsive movements, but occasional motion of the left hand and arm; respiration was quick; pulse 100; the lochia were present; the breasts were distended, the child having died the day before; she had no œdema of the feet or ankles; the bowels had been open the day before. When sharply spoken to, she apparently attempted to put out her tongue. She remained in the same state up to the evening of the following day, when, after turbulent tossing of left arm, rising in bed, quickened pulse, copious perspiration, hurried sibilant respiration, she expired.

The head only was allowed to be examined. There were small patches of extravasation inside the scalp over both sides of the occiput, due to knocking of the head against the headboard, apparently brain, congested on surface; some small patches of softening were seen outside the left choroid plexus. The left lateral ventricle was empty; the right contained considerable quantity of slightly bloody serum. The brain was otherwise healthy.

Dr. Tanner regretted the absence of any mention as to the state of the vessels of the brain. He thought it highly probable that this might have been one of those cases of plugging of one of the cerebral arteries by fibrine to which Kirkes and others had called attention. The condition of the woman was such as to favour the formation of such impediments to the cerebral circulation.

Dr. Graily Hewitt regretted rather that the condition of the kidneys had not been ascertained. The details of the case led him to suspect, that had they been examined, they would have been found diseased, notwithstanding the fact that no œdema was observed at the time of the attack. He was led to make this remark in consequence of his experience of a case somewhat similar to the one now reported, and in which disease of the kidneys gave rise to pretty nearly analogous symptoms and a like result.

Case of Quadruple Birth. By Henry G. Times, Esq. The great rarity of quadruple births—according to Collins' statistics, 1 only in 129,172 births—induced the author to lay the case before the Society. The patient, aged 33, was pregnant for the fifth time. She was taken in labour on the morning of the 23rd of September. At eight P.M., a female child was delivered by the midwife; ten minutes afterwards a second child, and twenty minutes afterwards a third, were born. Then followed a very large placenta, when the midwife, finding there was still another child, sent for Mr. Times. The placenta had drawn down the abdomen of the remaining child. After a little manipulation the feet were drawn down, and delivery of this, the fourth child, was effected. The first three were alive and crying; the last never breathed. There was little hæmorrhage. The previous pregnancy terminated at eight months, in December 1859. The last catamenial period was during the first week in March, but the discharge was so scanty that she conceived herself to be then pregnant. Hence the quadruplets were probably between six and seven months old. The children were all well formed, all upwards of twelve, and one thirteen, inches in length. The first lived seven hours; the next two, three hours. The placenta was single, but each funis had a distinct attachment. There was no lobulation of the placenta. The patient recovered well.

Dr. Routh inquired whether the movements of the children within the abdomen had given the woman any evidence of the uterus containing so many live occupants?

Mr. Times stated that the only thing observed by the woman was, that her abdomen was unusually large—a fact she accounted for by supposing that there was a large quantity of liquor amnii present.

Dr. Bloxam stated that in a case which came under his own observation, all four children were born alive, and at the full term.

The President made some interesting observations respecting plural births in general. He believed that, as stated by Hohl, the size of the abdomen was no criterion. Hohl found that in cases of twins, the abdomen was not often larger than in ordinary cases. He knew of a case in which the same woman had quadruplets twice within the year, and he had heard of cases of triplets twice or thrice over. He was himself one of six children, the six being the result of two pregnancies, one of which resulted in the birth of twins, in the other, of quadruplets. In answer to a question of Dr. Tanner, as to the greatest number of children he believed had been born at once, he referred the Society to Burdach's *Physiology*, in which several very remarkable cases would be found quoted. If he (the President) recollected aright, there was one instance, if not more, in which six children had been produced at a birth.

Dr. Gibb believed that in most of these cases of quadruplets the children die. He had, however, met with a curious instance while travelling in America; there being pointed out to him four young ladies, sixteen years of age, who, by common repute, were the product of one pregnancy.

ON THE PATHOLOGICAL LESION OF PHLEGMASIA DOLENS.

BY W. TILBURY FOX, M.D.LOND.

The paper was an appendix to a former communication read at the June meeting, in which it was attempted to show the necessary conditions of evolution of phlegmasia dolens; and the object of the present paper was to solve two main questions:—

1. The essential condition of the limb (the pathological lesion) of phlegmasia dolens.

2. The mode of production of this lesion.

In regard to the first point, it was maintained that the presence of fibrinous serosity in, with more or less hypertrophy of, the fibro-cellular tissue, is the essential, the sufficient, pathological lesion; that the inflammation, the abscess, the sloughing, etc., are not peculiar or necessary parts of the affection, but common to many diseases, and the result of an eliminative act to rid the system of some *blood-poison;* that the latter may produce lymphatic and venous obstruction, and hence, phlegmasia dolens; but it passes beyond this, giving rise to a distinct disease—such as abscess pyæmia, and the like.

Phlegmasia dolens in these cases is a local complication of the general disease, and the general symptoms are not parts of the phlegmasia dolens.

It follows then, that there are two types of the disease:—

a. The complicated, in which an eliminative process (inflammation, abscess, etc.) takes place, these being the answer acts of the tissue to the blood state; the epidemic form, in which an effect is produced by a virus, superadded to what occurs in

b. The other class,—the uncomplicated,—where the blood state does not require any eliminative actions to be performed on the part of the tissues, but where simple obstruction exists, such as pressure by tumour, etc., and simple thrombus; this being the essential, simple, ample disease,—all else being superadded and accidental.

It having been shown that venous obstructions produced

œdema *only*, and this *plus* lymphatic obstruction (phlegmasia dolens), the second question, as to the mode of production of the lesion in the limb, might be stated thus—How can obliteration of the lymphatics produce the peculiar change of the limb in phlegmasia dolens? The lymphatics, being obstructed, the three offices, of removing waste, of absorption, and of formative power, could not come into play.

It was then argued at length that the amount of lymphatic distribution and fibro-cellular tissue are in direct ratio—that fibrine is the pabulum of the latter tissue—and that Virchow's views on this point clash with sound doctrine. Lymphatic obstruction being followed by the retention of fibrinous serosity in the cellular tissue, the inference allowed by the foregoing facts was, that *one* office of the lymphatics is to remove all superfluous material from the cellular tissue—to keep the balance of nutrition there correct; hypertrophy and retention of fibrine in the cellular tissue ensuing upon lymphatic obstruction: and this explanation is confirmed by the behaviour of the lymphatics in cases of cancerous ulceration, etc. (When a blood-poison is present, *special tissue actions*—as abscess and the like—are superadded.)

It was attempted to be shown that absorption by the lymphatics from ulcerated surfaces might give rise to thrombus at the entrance of the thoracic duct into the junction of the jugular and subclavian veins, and thus account for phlegmasia dolens occurring in the upper extremity in cases of disease of other parts of the body—*e. g.*, cancer uteri.

Editor's Letter Box.

ECTOPIA CORDIS.

LETTER FROM EDWARD DANIELL, ESQ.

SIR,—Since the publication of my case of ectopia cordis in the JOURNAL of the 6th instant, I have received a communication from Dr. O'Bryen of Liverpool, referring me to a case of the like nature observed by him in 1837, and recorded in the *Transactions* of the Provincial Medical and Surgical Association for 1838, vol. vi, part 2.

This case, however, appears more to resemble the one quoted by me from the *Bulletin of the Faculty of Medicine*, p. 93, by M. Chaussier. At all events, it is not a case of uncomplicated ectopia cordis, resembling the one which came under my observation. In Dr. O'Bryen's case, the child, which was fourteen days old when first seen by him, was large, and, with the exception of the malformation, healthy. A tumour projected at the upper and anterior part of the abdomen; part of it was evidently filled by the abdominal viscera, while a part presented pulsatile movements. The child lived three months, and died after several attacks of convulsions. The tumour was covered by a thin skin; but no trace of muscular fibre could be discovered over it. The ensiform cartilage was wanting; the diaphragm was normal, except that the band of fibres attaching it to the ensiform cartilage was absent, so that an aperture was left. On raising the sternum, the heart was found covered by pericardium, lying nearly in the normal position. The right ventricle was much hypertrophied; the left ventricle was of ordinary thickness, and projected through the aperture above described. The protruded portion of the ventricle was attached to the pericardium. The tumour, on being first laid open, presented the transverse colon at its base. The lungs were healthy and well inflated.

The child which I saw lived only four hours, never having breathed: hence the action of the heart was dependent on the continuance of the stimulus derived from the blood of the mother. The heart lay exposed on the chest, denuded of pericardium; and the *post mortem* examination exhibited no abnormal condition in the organs either of the chest or abdomen. The sternum was absolutely wanting, save some rudimentary portion attached to the clavicles.

In my inquiry, I met with several instances of hernia of the heart, complicated with other displacements. In the *Cyclopædia of Anatomy and Physiology*, under the article "Teratology", are to be found many singular and interesting cases of hernial displacement; but I could not find a single instance where the heart had escaped alone, lying on the chest, in the manner which my drawing exhibits, and where life was kept up without breathing, and merely by the remains of the stimulus supplied by the placental circulation.

Had I known, however, of Dr. O'Bryen's case, I should certainly have quoted from it; for I regard it as one of great interest. I regret much, however, that I knew nothing of it until Dr. O'Bryen kindly directed my attention to it, for which I desire to express my obligation.

I am, etc., EDWARD DANIELL.

Newport Pagnell, October 13th, 1860.

TREATMENT OF APPARENT DEATH FROM CHLOROFORM.

LETTER FROM ROBERT S. FOWLER, ESQ.

SIR,—At the request of my colleagues, I beg to mention the plan which has been used for several years at the Infirmary here for rousing patients from the undue effects of chloroform, and which, thank God, has hitherto been invariably successful.

By vigorously slapping with the flat hand the naked surface of the body and limbs, and by flapping the face and front of the chest with the corner of a wet towel, a deep inspiration is rapidly produced, and the action of the heart is restored, even when the pulse has ceased. This is continued until the breathing, pulse, and colour, are natural.

In this port, the great rendezvous of steamships, accidents are severe and numerous; and, as chloroform has been employed in all serious operations from the first, the experience of years has given instances in which recovery has been brought about in this way, when both respiration and the pulse had stopped; and in similar, but minor conditions, which are alarming, lest they should go further, this simple remedy, which can at once be administered by many bystanders, has constantly succeeded in removing the apparent danger. The plan is so obvious, that it must be often used; but, as it is not mentioned, in the last inquest on a death from chloroform, as one of the means employed, we have thought it our duty to communicate the result of our experience at this Infirmary.

I am, etc., ROBERT S. FOWLER,
Senior Surgeon of the Royal South Hants Infirmary.

Southampton, Oct. 11th, 1860.

MEDICAL TITLES.

SIR,—A cotemporary medical journal has alluded to the evidence given by one of our associates, Mr. E. Waddington of Wakefield, in the inquiry recently carried on in that town in a case of poisoning. In his cross-examination, he answers, "I have my degree of M.D. from the Royal College of Physicians in Edinburgh, not from the University." Your contemporary remarks upon this strange statement of Mr. Waddington, but seems to have forgotten that this is not the first time that he has even more publicly called attention to the fact that he possesses, as he asserts, the degree of M.D. I give, without comment, and without giving expression to the suggestions formed in my mind by the letter at the time and since, a copy of it from the *Times* of March 30th last.

"*The Alleged Accident on the Great Northern Railway.* To the Editor of the *Times*. Sir,—My attention has been called to a letter in the *Times* of yesterday (signed Thomas Waddington, M.D., of Wakefield), the signature of which is as gross and impudent a fabrication as the circumstances which the writer professes to detail. I need only say that there is no 'M.D.' here named Waddington but myself, and that I was not on the Great Northern or any other railway on the 26th inst., when the accident is alleged to have occurred. Having obtained possession of the original letter, I have handed it over to my solicitors, in the hope that they may be enabled to discover and bring to justice the perpetrator of this very stupid hoax.—I am, sir, your obedient servant, (signed) Edward Waddington, M.D. Wakefield, March 28th."

I am, etc., AN ASSOCIATE.

October 1860.

ASSOCIATION OF THE FELLOWS AND LICENTIATES OF THE KING AND QUEEN'S COLLEGE OF PHYSICIANS, IRELAND. The following officers have been elected for the session 1860-61:—*President:* Dr. Corrigan. *Vice-Presidents:* Dr. O'Reilly, Dr. O'Brien Adams. *Council:* Dr. H. Kennedy, Dr. Lombe Atthill, Dr. Edward B. Sinclair, Dr. Alfred H. McClintock, Dr. Robert Law. *Treasurer:* Dr. George A. Kennedy. *Secretary:* Dr. William Moore. The meetings of the Association are held in the College Hall (Sir P. Dun's Hospital), on the evenings of the first Wednesday in every month during the session, at 8 o'clock P.M.

Medical News.

BIRTHS, MARRIAGES, DEATHS, AND APPOINTMENTS.

** In these lists, an asterisk is prefixed to the names of Members of the Association.*

BIRTHS.

Of sons, the wives of—

*Hodgson, G. F., Esq., Brighton, on October 10.
Jenner, William, M.D., Harley Street, on October 12.
Kent, Benjamin A., M.D., Ryde, on October 9.
Lee, Henry, Esq., Savile Row, on October 14.
*Trew, Thomas N., Esq., Aspley Guise, Woburn, on Oct. 11.

Of daughters, the wives of—

*Bryden, Richard, Esq., Uffculme, Devon, on October 10.
Leach, Henry, Esq., Surgeon, Union Street, Southwark, on October 16.
Lithgow, James, M.D., Weymouth, on October 11.
Pearse, Wm. E. G., L.R.C.P.Ed., Marsham Street, on Oct. 14.
*Rogers, William R., M.D., Berners Street, on October 1.

MARRIAGES.

Blackman, Matthew, Esq., Surgeon, to Maria L., third daughter of the late Thomas S. Woodley, Esq., of Brixton, on October 17.

Clarke, Thomas Charles, Esq., only surviving son of James Clarke, M.D., of Ham, Surrey, to Sarah M., daughter of William Cooper, Esq., of Hereford, at St. Pancras Church, on October 9.

Down, J. Langdon H., M.D., of Earlswood, Redhill, to Mary, daughter of Philip Crellin, Esq., of Clapton Square, at Hackney, on October 10.

Ehrhardt, August, M.D., of Gotha, to Elizabeth, third daughter of Henry Fowler, Esq., Porchester Square, at Neuwied, on October 13.

Fishwick, Henry, Esq., to Ellen, youngest daughter of W. H. Bullmore, M.D., of Truro, on October 16.

Hood, the Rev. W., Vicar of Nasing, Essex, to Theresa K., youngest daughter of the late Henry Lucas, M.D., Brecknock, at Clifton, on October 10.

Morgan, Crosby W., Esq., Surgeon, Newcastle, New South Wales, to Jessie, only daughter of the late Captain Paterson, H.E.I.C.S., Crofton Hill, Lanark, at Sydney, on July 5.

Newton, Harry R., Esq., to Edith N., youngest daughter of Archibald Billing, M.D., of Grosvenor Gate, at St. George's, Hanover Square, on October 6.

Parry, Francis J., Esq., to Gratiana, second daughter of J. M. Coley, M.D., of Llandudno, at Bridgnorth, on October 4.

*Price, Peter C., Esq., of Green Street, Grosvenor Square, to Frances Agnes, youngest daughter of William Durham, Esq., of Kensington, on October 10.

Toogood, Octavius, Esq., Her Majesty's Bengal Civil Service, son of J. Toogood, M.D., Torquay, to Clara, daughter of the late Lawrence Gwynne, LL.D., of Teignmouth, on Oct. 11.

Tomkyns, Alexander P., Esq., Civil Surgeon, Delhi, to Amelia, fourth daughter of Samuel Cardozo, Esq., London, at Landour, on August 14.

Weekes, William H. C., Esq., only son of *Richard Weekes, Esq., of Hurstpierpoint, to Julia, youngest daughter of Wm. V. Langridge, Esq., of Hove, Sussex, on October 10.

DEATHS.

Barrow, William T. H., Esq., Surgeon, of Settle, at Ventnor, on October 8.

Crocker. On September 23rd, at Malta, aged 15 months, Alfred D., youngest son of Alfred Crocker, Esq., 2nd battalion 3rd Buffs.

Du Gard. On October 12th, at Shrewsbury, aged 70, Marianne, widow of the late Thomas Du Gard, M.D.

Griffith. On October 12th, at 39, Oakley Square, N.W., Mary Ann, wife of Edward Griffith, Esq., Surgeon.

Hoyland. On September 19th, at Constantinople, aged 20, Roynon B., third son of Dr. Hoyland, of the British Seamen's Hospital, Galata.

Lucy. On October 8th, at Fenny Stratford, aged 24, Catherine, wife of William Lucy, Esq., Surgeon.

O'Connor. On October 12th, at March, aged 11, Mary, eldest daughter of *Thomas O'Connor, Esq.

APPOINTMENTS.

Cusco, M., Surgeon to the Salpêtrière, appointed Surgeon to the Hôpital du Midi, in room of M. Ricord, resigned.

Kirkman, William P., M.D., elected Resident Physician and Superintendent of the new Lunatic Asylum for the united counties of Cumberland and Westmoreland.

PASS LISTS.

Royal College of Surgeons. Licentiates in Midwifery admitted at a meeting of the Board on October 17th:—

Coleman, Alfred, Wandsworth; diploma of membership dated April 20, 1860
Cooke, William, Tunbridge, Kent; April 5, 1822
Crawford, Cooper Hayes, Stafford; March 7, 1856
Dawson, Frederick, Islington; April 19, 1860
Farrington, Wm. Hicks, Ottery St. Mary; April 15, 1859
Grabham, Charles, Rochford, Essex; April 11, 1859
Harris, John Charles, Chipping Norton; April 18, 1859
Iliffe, Robert, Coventry; August 2, 1860
March, Henry Colley, Rochdale; April 20, 1860
Metcalfe, Richard, Hawes, Wensleydale; April 13, 1860
Nell, George Michael, Colombo, Ceylon; March 14, 1859
Richards, John Smith Crosland, Bedford Square; August 1, 1860
Spaull, Barnard Edward, Hammersmith; April 6, 1856
Williams, William, Penrhyn, Holyhead; Nov. 12, 1858

Apothecaries' Hall. Licentiates admitted on *Thursday, October 4th*, 1860:—

Bride, John Godfrey, Saxmundham	Jennings, Robt., Pontypridd
	Milson, Richard H., London

The following gentlemen also, on the same day, passed their first examination:—

Bond, Charles R., Greenwich	Olive, Edward, Hillingly

Royal College of Surgeons. From a report of the Royal College of Surgeons of England just published, it appears that there are now 1267 Fellows of the College, of which number 249 have undergone the examination for that honour. The Members amount to about 14,000; and the Licentiates in Midwifery to 769; whilst the number of persons who have received the certificate of qualification in dental surgery, and who now appear for the first time in the official list, amounts to exactly 100. The receipts and expenditure of the College in the year, from Midsummer-day 1859 to Midsummer-day 1860, were, of the former, £22,307 : 9 : 8, derived principally from the following sources, viz.: Diploma of member, £14,355 : 10; certificate in dental surgery, £929 : 5; license in midwifery, £198 : 9; fellowship, £840; dividends on investments in government securities, £1,207 : 14 : 6. The disbursements amounted to £21,906 : 18 : 3, including the sum of £7,761 : 18 for the purchase of the house No. 43 adjoining the College. From the report, it further appears that the incidental income of the College may be put down as amounting to £21,099 : 15 : 2, and the permanent income to only £1,207 : 14 : 6; the incidental expenditure to £18,173 : 12 : 2, and the permanent expenditure to £3,733 : 6 : 1.

Stramonium in Hydrophobia. The *Presse Médicale Belge* states, on the authority of Father Legrand de la Leray, one of the oldest missionaries in Tonquin and Cochin China, that in those countries hydrophobia is cured by boiling a handful of the leaves of *Datura Stramonium* in a litre of water, until reduced to one-half, and then administering the potion at one dose. A violent paroxysm of rage ensues, which lasts but a short time, and the patient is cured in the course of twenty-four hours. The great difficulty would appear to consist in administering the remedy to the patient. (*Pharmaceutical Journal, October* 1860.)

Blistering Paper. Take of cantharidine, ʒj; white wax ʒj; olive oil, ʒv. Melt together. With a brush paint it over some white bibulous paper, and hang up to dry in a current of air. Take a piece of pink paper form and size required, the under coloured side paint over with a weak solution of india-rubber; cut the cantharidine paper the form and size (less a margin) of the pink paper, and while the india-rubber solution is still sticky place it on, and when dry roll it up. It is unaffected by damp, and blisters with certainty. Before applying, the blister should be held over the steam of hot water. (*Pharmaceutical Journal, October* 1860.)

HEALTH OF LONDON—OCTOBER 13TH, 1860.

[*From the Registrar-General's Report.*]

	Births.	Deaths.
During week	Boys.. 876 / Girls.. 813	1689 .. 1018
Average of corresponding weeks 1850-9		1578 .. 1120

Among the causes of death were—bronchitis, 65; pneumonia, 89; phthisis, 123; small-pox, 3; scarlatina, 48; measles, 39; diphtheria, 10; hooping-cough, 26. The deaths from pulmonary diseases (exclusive of phthisis) were 170, being 35 above the corrected average.

Barometer:
Highest (Sun.) 30.062; lowest (Sat.) 29·396; mean 29·750.

Thermometer:
In sun—highest (Tu.) 86·0 degs.; lowest (Th.) 53·2 degs.
In shade—highest (Sun.) 60·0 degs.; lowest (Fri.) 32·4 degs.
Mean—41·8 degrees; difference from mean of 43 yrs.—5·8 degrees.
Range—during week, 27·6 degrees; mean daily, 13·3 degrees.
Mean humidity of air (*saturation* = 100), 85.
Mean direction of wind, Var.—Rain in inches, 0·42.

TO CORRESPONDENTS.

ANONYMOUS CORRESPONDENTS should always enclose their names to the Editor; not for publication, but in token of good faith. No attention can be paid to communications not thus authenticated.

Members should remember that corrections for the current week's JOURNAL should not arrive later than Wednesday.

POSTAGE OF MANUSCRIPT AND PRINTED MATTER.

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BOOKS RECEIVED.

[* *An Asterisk is prefixed to the Names of Members of the Association.*]

1. On Myalgia: its Nature, Causes, and Treatment. Being a Treatise on Painful and other Affections of the Nervous System, which have been frequently mistaken for Hysterical, Inflammatory, Hepatic, Uterine, Nervous, Spinal, or other Diseases. By *Thomas Inman, M.D. London: Churchill. 1860.

2. Further Observations in Several Parts of Surgery. By Benjamin Travers. To which is appended an Original Memoir on the Nature and Treatment of some Unusual Forms of Eye Disease. By the late Benjamin Travers, F.R.S. London: Longman and Co. 1860.

3. The Bath Waters: their Uses and Effects in the Cure and Relief of Chronic Diseases. By *James Tunstall, M.D. Second Edition. Revised and Enlarged. London: Churchill. 1860.

4. The Six Months Seasons of the Tropics. By James Lees. London: Longman and Co. 1860.

5. On the Reparative Process in Human Tendons after Subcutaneous Division for the Cure of Deformities; with an Account of the Appearances presented in Fifteen Post Mortem Examinations in the Human Subject, etc. Illustrated by Seven Lithograph Plates and a series of Woodcuts. By *William Adams, F.R.C.S. London: John Churchill. 1860.

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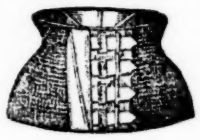

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